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USARIEM TECHNICAL REPORT T02/18

**THE U.S. ARMY'S
HEALTH RISK APPRAISAL (HRA) SURVEY, PART II:
GENERALIZABILITY, SAMPLE SELECTION,
AND RESPONDENT PROFILE**

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June 2002

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LIST OF ACRONYMS

DMDC	Defense Manpower Data Center
DoD	Department of Defense
HEAR	Health Enrollment Assessment Report
HRA	Health Risk Appraisal
ICD-9-CM	International Classification of Diseases, Ninth Revision, Clinical Modification
PASBA	Patient Administration Systems and Biostatistical Activity
SSN	Social Security Number
TAIHOD	Total Army Injury and Health Outcomes Database
USACHPPM	U.S. Army Center for Health Promotion and Preventive Medicine

EXECUTIVE SUMMARY

The U.S. Army Health Risk Appraisal (HRA) survey was used widely by the Army for almost a decade to measure the general health of soldiers and to provide soldiers with feedback regarding their health and health behaviors. Because it includes extensive data on health behaviors and can be linked to subsequent encounters with the health care system, it also has potential as an important resource for epidemiological research. However, the HRA was not offered to the entire Army population, nor was it systematically administered to those who did receive it. Therefore, it is not clear to what degree results from analyses of HRA data can be generalized to the entire Army. The goals of this report are to describe the population of active duty Army soldiers who have taken the HRA and compare them to those who have not; to describe the demographic characteristics of HRA respondents who skip potentially sensitive items; and to describe respondents reporting extreme values for certain health behaviors. Ultimately, this information will be useful to researchers and health policy makers in deciding how to interpret results from epidemiological studies that use HRA data.

The HRA survey data described in this report have been linked to the Total Army Injury and Health Outcomes Database (TAIHOD). The TAIHOD includes data from different administrative sources including hospitalizations, deaths, and personnel data such as demographic and occupational information. Before linking the HRA surveys to the TAIHOD, the surveys were systematically evaluated to ensure that all respondents were active duty service members. Many civilian employees, retirees, or dependents of active-duty soldiers also took the HRA; this report focuses on a more carefully qualified group of active duty survey respondents than were perhaps included in some other reports that have used HRA data. Our data cleaning and qualification process also discarded many duplicate and near-duplicate surveys, an issue possibly overlooked by some users of the Army HRA database. Most analyses presented here are descriptive and include frequencies, percentages, means, standard deviations, and ranges of values.

This report analyzes HRA survey responses from January 1991, through December 1998. Despite not being systematically offered to a random sample of soldiers, there does not appear to be bias in terms of oversampling of soldiers who were ill. There were few substantial differences between HRA takers and nontakers with respect to demographic characteristics such as age, gender, and race. HRA takers were generally slightly more likely to be single, have shorter total time in active service, have fewer dependents, and were of lower rank, especially in the later years of the HRA program. HRA takers were no more or less likely to have been hospitalized than those who did not take an HRA. There is relatively little missing data on the HRA even for sensitive items. While those who skip sensitive items are more likely to be from minority groups and of enlisted rank, the total proportion of respondents who skip sensitive items is quite small, generally less than 1 or 2% of the population. A small proportion of respondents report extreme or outlying values on certain items (e.g., weekly alcohol consumption in excess of 30 drinks). These same respondents were more likely to

express suicidal ideation, possibly suggesting they may indeed be at extremely high risk, or are perhaps over-reporting extreme values in order to seek help or intervention from the survey administrator.

INTRODUCTION

The U.S. Army Health Risk Appraisal (HRA) survey was widely used over the past decade to measure the general health of soldiers and to provide soldiers with feedback regarding their health and health behaviors. A companion report to this document details the history of this survey and originating sources for the survey items (13). While the HRA was intended as a health promotion tool it has also become a useful source of information for epidemiologists and health researchers. However, because the HRA was not offered to the entire Army population, nor was the population who were offered the survey selected systematically, it is not clear whether results from analyses of HRA data can be generalized to the entire Army.

Some civilian studies of health risk appraisal questionnaires suggest that survey takers may differ from nontakers with respect to important risk factors such as age, gender, educational attainment, and health status (6). A report of the Navy's experience with a different HRA than the one in use by the Army noted that Navy HRA respondents were older, better educated, smoked less and drank less alcohol, and used seat belts more often than nonrespondents (11). A study of HRA takers in a corporate environment paradoxically found that although HRA respondents reported lower levels of health risks at baseline, they filed more health claims and had higher claims costs than nonresponders (10). The picture that emerges could thus indicate that HRA responders may be more health conscious than nonresponders, or that they may represent the "worried well." Alternatively, because the HRA was administered to some soldiers seeking care at a health clinic, the HRA database may include responses from individuals who, as a group, may be sicker than the overall Army population.

The generalizability of the HRA may also be affected by response bias resulting from nonrandom missing data. The Army's HRA was not taken anonymously. It is possible that some soldiers, fearing reprisals for certain types of responses, may have skipped some of the more sensitive items (e.g., those pertaining to alcohol consumption habits). If these tendencies were more common among certain subgroups of Army soldiers (e.g., soldiers of certain age, racial/ethnic, or gender groups), then this might distort the information the HRA yields and should be considered before interpreting or making policy decisions based upon these data.

The goal of this report is to describe the population of active duty Army soldiers who have taken the HRA and compare them to those who have not. This relates to the external validity, or generalizability, of the HRA, as well as potential selection bias. This report will also describe the demographic characteristics of HRA respondents who skip certain potentially sensitive items as compared to those who complete them and explores the demographic characteristics of respondents who report extreme values for certain health behaviors.

METHODS

THE DATA

History of the HRA Survey

There is very little written evidence documenting the process used to develop the HRA survey instrument or its evolution through its various iterations. After an exhaustive search and interviews with dozens of individuals involved in the early development of the Army's health promotion program, we are still uncertain as to exactly how many versions of the questionnaire were in use during the life of the program. Most of the information we have been able to obtain suggests that the first version of the questionnaire appeared in the early to mid 1980s. We are fairly certain that the HRA survey (DA Form 5675) was first issued in March 1988, underwent a substantial revision in October of 1990, and was subsequently slightly revised in February of 1992. Copies of both the October 1990 version and the February 1992 version appear in Appendix A.

Very little information exists regarding the 1988 version of the form and we were unable, after an extensive search, to locate any existing electronic data files from the 1988 survey. Although the HRA program was officially initiated in 1988, and we have anecdotal reports that as many as 800,000 HRAs were administered in the first year of the program, we have not been able to locate an electronic repository of any HRAs taken prior to October of 1990. This report analyzes results of HRA surveys taken between January 1991, and December 1998, which includes data from both the 1990 and the 1992 version of the HRA survey.

The HRA, as a component of an Army wide health promotion program, was officially discontinued in 1998, although it is still in limited use at some active duty installations and is being used by the Army Reserve.

Administration of the HRA

Army HRA survey data were collected worldwide at individual Army bases and sent via computer disk to various central collection points. Although not offered to soldiers through a random sampling process, surveys were administered in a variety of settings including routine in-processing to a new base or duty assignment, during routine physical examinations, during routine physical fitness testing, at walk-in clinics or occupational health centers, or via other mechanisms.

By 1992, between 4,000 and 6,000 active duty soldiers were taking the HRA in a typical month. The volume remained at that level through the rest of the program, though in the fourth quarter of 1993 there was an unexplained drop in the number of HRAs recorded in the central database. In September of 1993, 5596 HRAs were recorded; in October of 1993, only 473; in November of 1993, only 159; and in December of 1993, only 207. Then in January of 1994, the numbers increased again as 4389 HRAs were recorded. The level remained fairly stable from January 1994 until the program was discontinued in 1998. We have made extensive efforts to contact people

who were in charge of administering the program in the fourth quarter of 1993, and no one has been able to recall any programmatic reason to explain the lower than expected number of HRAs recorded during that time (for example, they have no memory of a global order to suspend the program temporarily). It is likely that the absence of data for this time period is related to a problem with the collection or processing of data and not necessarily a drop off in responses during that time period.

The electronic database of responses to the 1990/1992 versions of the questionnaire contains a field indicating the date of survey administration, but there is no variable in the database indicating which version of the survey the respondent was using. Changes between the 1990 version and the 1992 version were generally very minor and, in fact, did not introduce any new questions. One change, however, did have a substantial impact on our ability to thoroughly evaluate missing responses to the survey's alcohol-related problems items. In the 1990 version of the survey, respondents were instructed to skip items 29-34 asking about alcohol-related problems if they reported in item 28 that they drank zero drinks per week (presumably abstainers). This skip instruction was deleted from the 1992 version of the survey. It is likely that the HRA program administrators who implemented the program locally on each individual Army installation exhausted the existing inventory of the 1990 form before switching to the 1992 version. Administratively, the Armywide transition from one form version to another may well have taken several months, perhaps even more than a year, to complete. In the absence of a variable in the database indicating which version of the form the respondent was using, it is very difficult to determine whether the items about alcohol related problems were skipped because the respondent wished to avoid reporting sensitive information or if the respondent was simply following the skip instructions.

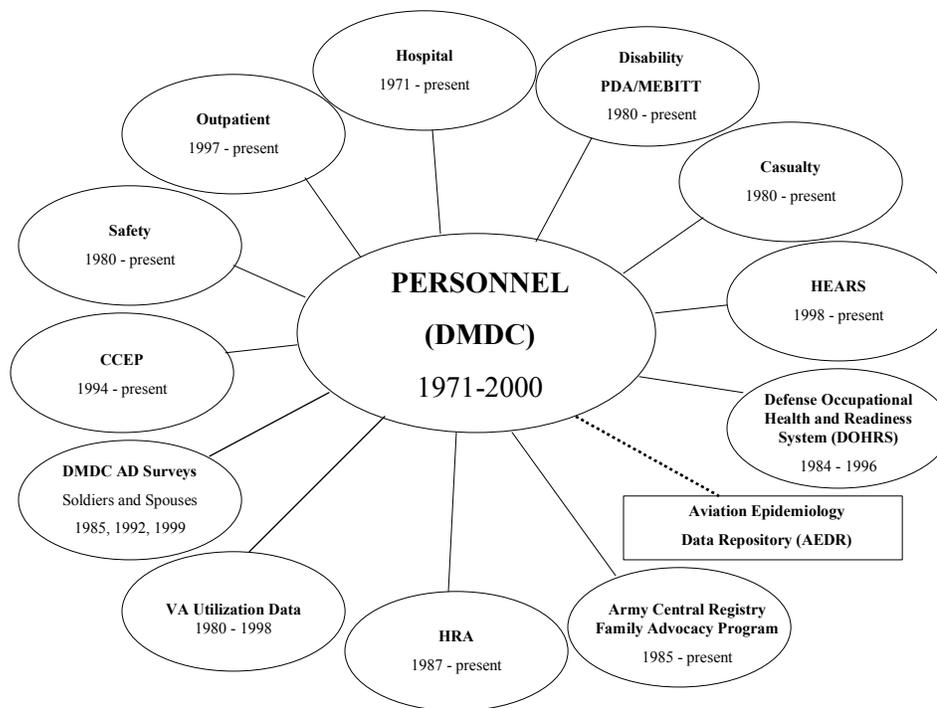
The date of administration was read in from the DOS or Windows date clock from the computer's operating system when the survey was scanned, and became part of the specific data file associated with that individual's HRA. The date the survey was taken is quite important, as it allows us to study the temporal sequence of behavior and health outcomes. However, because the computer operating system clocks could have been set incorrectly, there is a possibility that these dates and times may occasionally have been inaccurate. If the DOS or Windows date clock had not been properly set, it would have recorded an incorrect date of administration, although the HRA administration software installation instructions prompt users at several points in the installation process to check their Windows clock to make sure it is properly set (14).

Individual soldiers often had multiple opportunities to take an HRA over the course of their Army careers and the result of this is a significant number of repeat respondents in the database. On average 3%-4% of the HRAs taken each year represented surveys taken by individuals who had taken it previously. Overall, about 80% of the total number of HRAs completed were from first-time respondents and the remaining 20% were from those who have taken the HRA more than once. Fewer than 2% of active duty soldiers have taken the HRA more than twice.

Linking the HRA to the Total Army Injury and Health Outcomes Database

While the HRA data alone provide a rich source of information important to understanding the health and health behaviors of active duty servicemembers and their families, their greatest potential may be attained through linkage with other health databases. The HRA have been linked to one such database, the Total Army Injury and Health Outcomes Database (TAIHOD, see Figure 1). The core of the TAIHOD includes demographic and personnel information on more than five million Army soldiers who have served on active duty since 1971. The TAIHOD draws on administrative data from various Department of Defense (DoD) agencies, and contains information on a wide variety of health outcomes (e.g., inpatient hospitalization records since 1971, outpatient encounters since 1997, accidents reported to the Army Safety Center), exposure information (e.g., toxic substance exposure data, deployment activation files), and health habit data from the HRA and the Health Enrollment Assessment Report (HEAR) surveys. Information in the database is linked by encrypted Social Security Number (SSN) at the level of the individual soldier.

Figure 1. The Total Army Injury and Health Outcomes Database (TAIHOD)



The analyses described in this report use TAIHOD data from the HRA, Army personnel files, and records of inpatient hospitalizations. Personnel files were originally obtained from the Defense Manpower Data Center (DMDC) and include demographic data, occupational information, and discharge information (e.g., dates of service and reason for discharge). These data are updated semiannually. The hospital data come from the Patient Administration Systems and Biostatistical Activity (PASBA). We used dates of admission and ICD-9-CM codes for hospital diagnoses. To define injury-

related hospitalizations, we included all admissions with primary diagnosis in the 800-959 range of the ICD-9-CM.

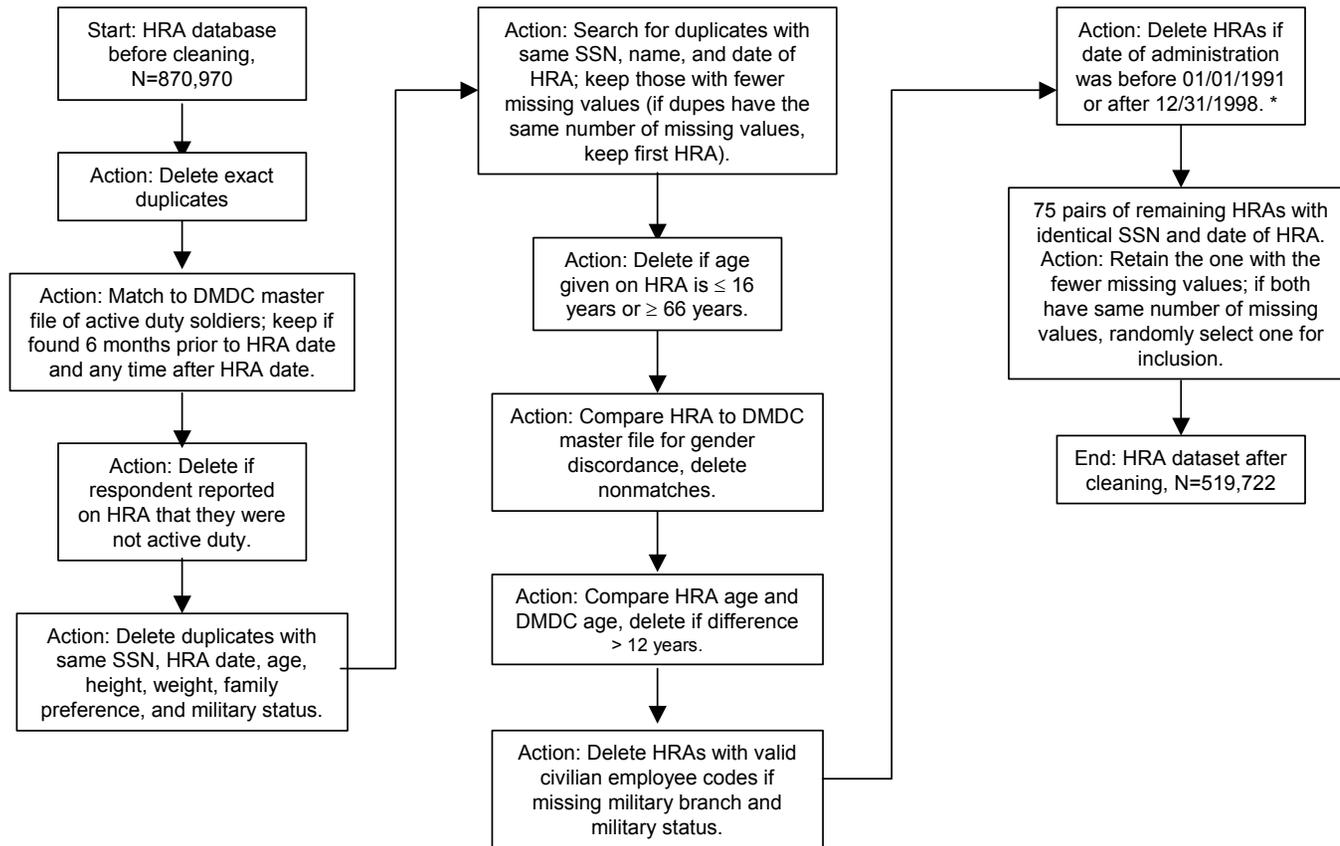
Survey Selection Criteria for Linkage to TAIHOD: Verifying Active Duty Status of Survey Takers and Removing Duplicate Surveys

One important step to linkage of the HRA to the TAIHOD included a review of qualifying characteristics to remove surveys not taken by active duty servicemembers and surveys that provided duplicate responses for the same person. In some instances, family members, retirees, and Department of the Army civilian employees were offered HRA surveys. It is common practice for dependents of military servicemembers to use the servicemember's SSN to access military benefits, especially military medical benefits such as participation in health promotion programs like the HRA. It is therefore important that researchers using the HRA database attempt to determine whether the surveys being evaluated are those of an active duty servicemember or those of a civilian employee, retiree, or family member. In addition, our investigation of HRA data suggests that many surveys are duplicates or near duplicates. Duplicate surveys may have been included in the database if a survey was inadvertently sent through the scanning machine more than once. In many cases, near duplicate surveys occur with the same administration date. Anecdotal evidence suggests that this might have occurred if a soldier submitted a survey to the administrator, the survey was scanned, and then the administrator noticed an omitted response. The administrator may have directed the survey taker to complete the item before rescanning the survey and generating a final risk report. Different versions of the HRA software may have handled rescanned surveys differently. Therefore the importance of this issue may vary over time.

In order to address concerns regarding the true identity of the survey taker and problems with duplicate responses we have taken a restrictive approach to qualifying survey respondents for the purposes of our research (see Figure 2 below). We began with an intensive and scrupulous process of error checking and review of the HRA files we received. We took a restrictive approach to removing duplicates and near duplicates, as well as individuals who we could not confirm as being active-duty servicemembers. Details on the steps taken to prepare this database are shown in Figure 2.

In addition to cleaning the HRA data of duplicate surveys, we have linked individuals with completed surveys to the personnel files in the TAIHOD. In addition to matching on SSN, we compared the gender and age of the HRA respondents to their personnel records. The HRA includes an item that asks about duty status, and we excluded respondents who did not indicate that they were on active duty. We thus have a fairly high degree of certainty that all data reported here are from HRAs that were taken by active duty Army soldiers.

Figure 2. HRA Data Qualifying Process to Match HRAs to Active-Duty Soldiers in the Total Army Injury and Health Outcomes Database



* Done only for purposes of these analyses.

ANALYTIC APPROACH

Most analyses presented here are descriptive and include frequencies, percentages, means, standard deviations, and ranges of values. SAS version 8.01 (SAS Institute, Cary, NC) was used for most analyses. Microsoft Excel 2000 (Microsoft Corporation, Redmond, WA) was used to calculate population-based rates and to display data in some of the figures.

To evaluate the potential for selection bias, which would occur if soldiers who were sicker were offered more opportunities to take the HRA, we examined the HRA item indicating the reason for taking the HRA, which included categories for administration during a health clinic visit. We also examined health care utilization in the year prior to taking an HRA by comparing hospitalization rates among HRA takers and nontakers.

In order to assess the impact of the deletion of the skip pattern in the alcohol item sequence between the 1990 and 1992 versions of the survey, we evaluated the proportion of HRA respondents who were missing responses to the items about alcohol-related problems (items 29-34). For the years 1992-1994, it is difficult to parse out which soldiers legitimately did not respond to items 29-34 (because the 1990 version instructed nondrinkers to skip some items) and which soldiers may have skipped them because they did not want to divulge this information. Respondents who reported any alcohol use in item 28, however, should have also answered items 29-34, regardless of which version of the survey they took. We thus compared the demographic characteristics of all nonabstaining HRA takers (i.e., soldiers who reported consuming one or more drinks per week in item 28) who completed items 29-34 to nonabstaining soldiers who were missing responses to items 29-34.

The analyses conducted for this paper adhere to the policies for protection of human subjects as prescribed in Army Regulation 70-25 and with the provisions of 45 CFR 46.

RESULTS

WHO TAKES THE HRA? DEMOGRAPHIC CHARACTERISTICS OF HRA TAKERS OVER TIME

Figure 3 shows the total number of soldiers on active duty from 1991 through 1998 as well as the relative proportion of the population in each year who had taken one HRA and those who had taken multiple HRAs between 1991 and 1998. The chart shows the decline in total population size with military downsizing over this time period. As expected, the relative proportion of the population who had taken more than one HRA increased over time as soldiers who remained on active duty were more likely to have opportunities to take the survey.

Figure 3. Total Active-Duty Army Population and Proportion of Active-Duty Army Soldiers Who Had Completed One HRA or More than One HRA, 1991-1998

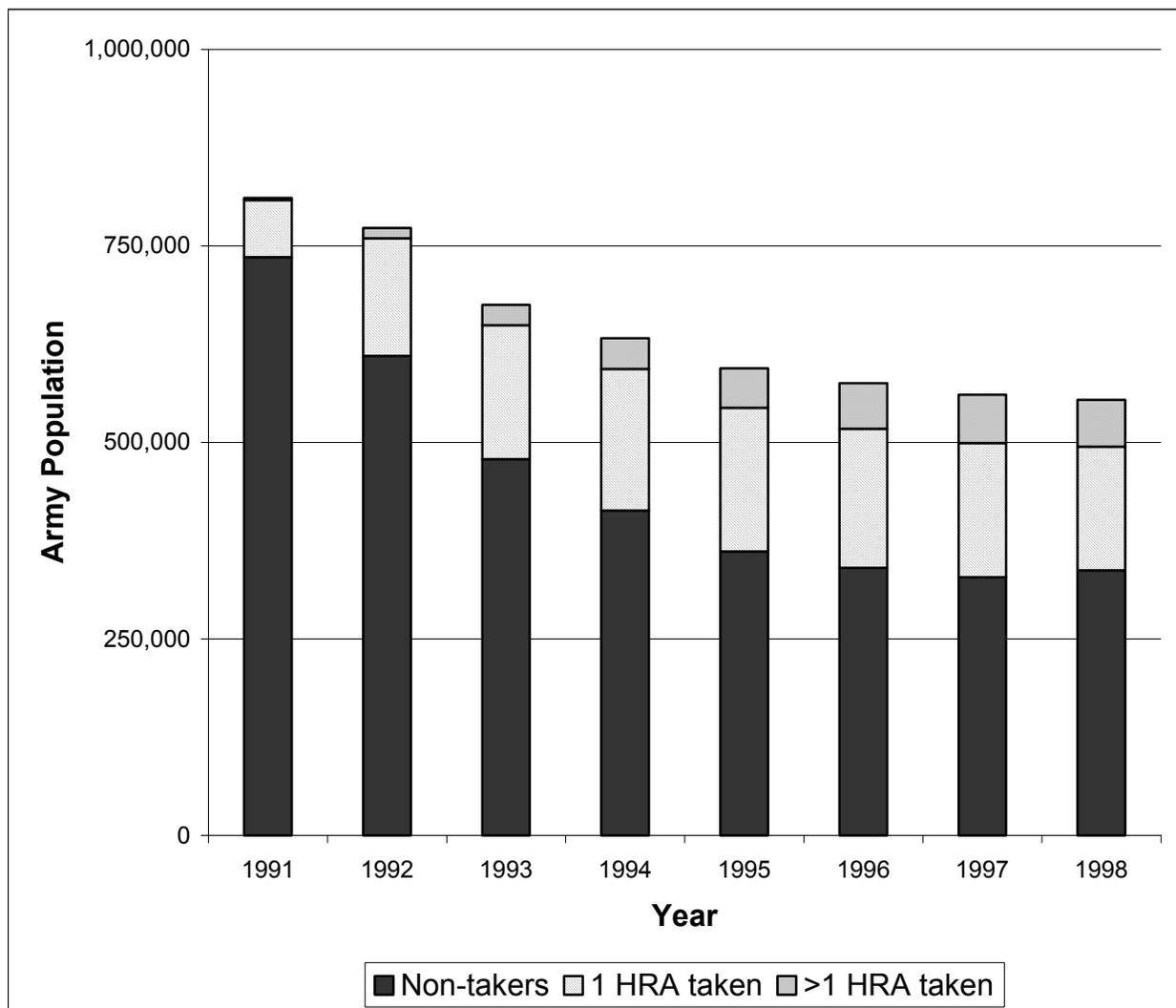


Figure 4 shows the total numbers of HRAs administered during each year, from 1991 through 1998. The proportion of the Army who took an HRA reached a peak in about 1992; about 12% of the Army on active duty that year took the survey (number of individuals = 92,148, numbers of surveys administered = 104,505). More surveys than individuals were recorded as some soldiers completed more than one HRA in that year. After 1992, survey administration rates began to decline and in 1998, 22,637 surveys were administered (including only about 2.6% of total Army on active duty that year).

Figure 4. Total Number of HRAs Administered in Each Year, 1991-1998

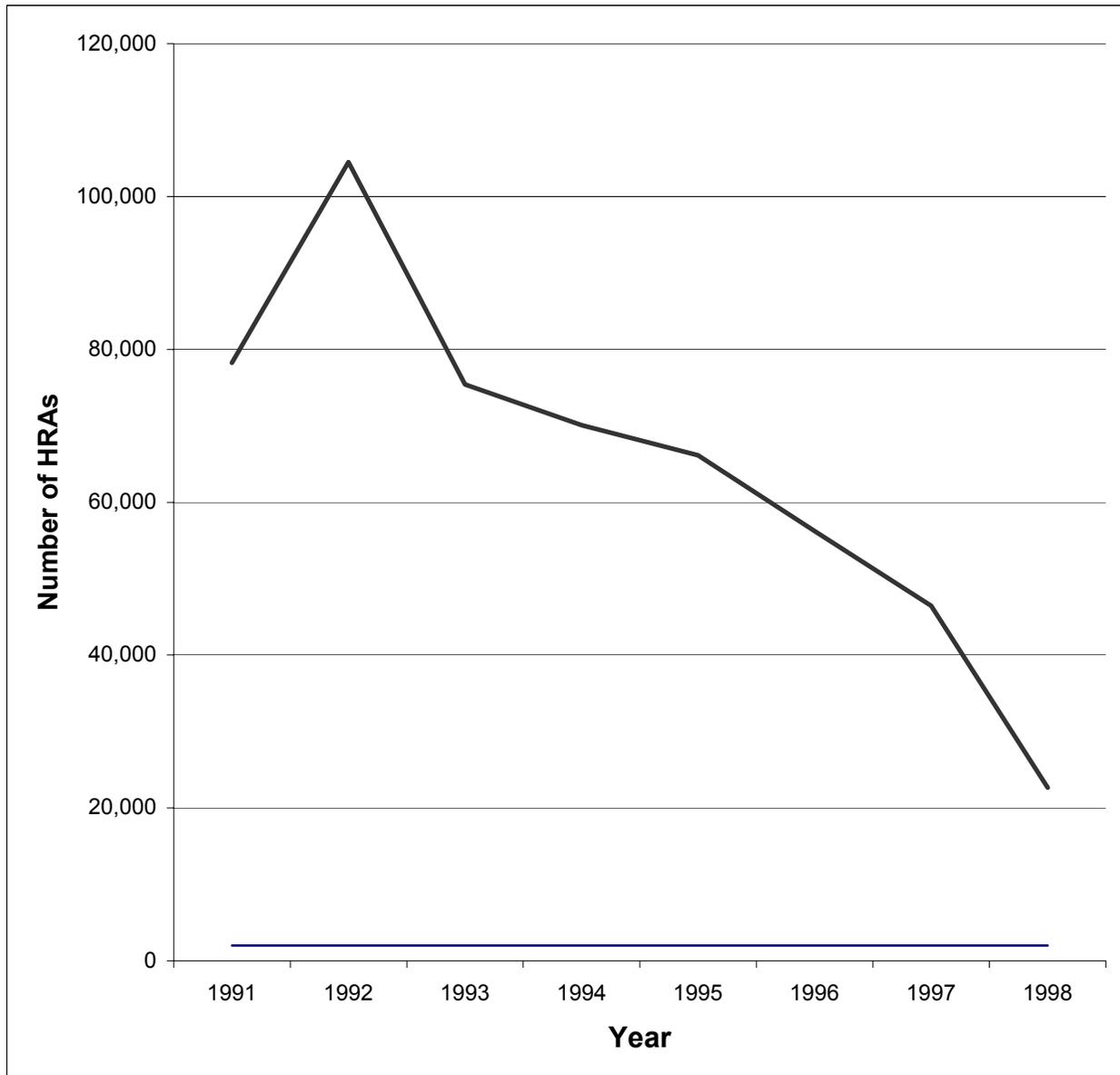


Table 1 shows the age distribution of soldiers, from 1991-1998, who took an HRA in a given year compared to those soldiers who did not take an HRA but were on active duty during that same year. Differences in mean age between HRA takers and nontakers were minimal.

Table 1. Number and Age of Active-Duty Army HRA Takers and Nontakers, 1991-1998

Year	HRA Status	N	Mean Age (Range)
1991	Takers	74,417	28.5 (17-64)
	Nontakers	524,171	27.7 (17-83)
1992	Takers	92,303	28.1 (17-83)
	Nontakers	460,412	28.0 (17-84)
1993	Takers	59,159	28.0 (17-66)
	Nontakers	364,249	27.8 (17-83)
1994	Takers	50,008	26.9 (17-79)
	Nontakers	330,624	27.8 (17-83)
1995	Takers	45,344	27.2 (17-64)
	Nontakers	307,466	27.7 (17-72)
1996	Takers	37,037	26.4 (17-66)
	Nontakers	303,079	27.2 (17-73)
1997	Takers	30,853	25.3 (16-76)
	Nontakers	313,050	26.8 (17-77)
1998	Takers	14,795	25.3 (17-58)
	Nontakers	330,997	26.5 (17-71)

Note: Ns vary among tables in this report because some respondents were missing data on a variable of interest.

Table 2 also depicts age by year and whether the individuals took an HRA in that year. Here age is displayed in standard increments to allow comparison to other data sources. This table demonstrates a slight difference in age composition of survey respondents as compared to non-HRA takers. Soldiers under age 21 are over-represented among HRA takers. Soldiers age 21-25 are slightly under-represented among HRA takers. Also noteworthy is the larger percentage of missing data on age among nontakers relative to HRA takers. The reason for this difference in missing values is unclear.

Table 2. Proportion of Active-Duty Army HRA Takers and Nontakers, by Age and Year, 1991-1998

Year	HRA Status	N	Missing	<21 years	21-25 years	26-30 years	31-35 years	36-40 years	>40 years
1991	Takers	74,534	0.2	15.3	28.8	20.4	14.6	12.8	8.0
	Nontakers	533,219	1.7	12.6	35.5	20.8	13.3	8.9	7.2
1992	Takers	92,489	0.2	17.5	28.9	19.3	14.8	11.9	7.3
	Nontakers	468,754	1.8	11.7	34.5	20.6	14.3	10.0	7.2
1993	Takers	59,325	0.3	19.5	32.0	18.1	13.0	11.3	5.8
	Nontakers	372,978	2.3	13.6	34.2	19.3	13.3	10.2	7.0
1994	Takers	50,248	0.3	21.0	32.4	18.6	12.5	10.4	4.7
	Nontakers	338,023	2.2	14.2	33.9	19.1	13.6	10.6	6.5
1995	Takers	45,436	0.2	19.3	31.7	19.3	14.2	10.6	4.8
	Nontakers	313,910	2.1	13.9	34.8	19.1	13.6	10.3	6.2
1996	Takers	37,075	0.1	24.4	31.7	17.4	12.4	9.6	4.5
	Nontakers	311,896	2.8	16.0	34.4	19.1	12.9	9.2	5.5
1997	Takers	31,032	0.6	29.3	32.7	17.0	10.2	6.9	3.3
	Nontakers	318,434	1.7	18.8	34.3	19.2	12.4	8.7	5.0
1998	Takers	14,827	0.2	28.3	33.3	18.7	10.4	6.5	2.7
	Nontakers	339,046	2.4	20.0	34.5	19.0	11.6	7.9	4.6

Note: Ns vary among tables in this report because some respondents were missing data on a variable of interest.

Over time, the gender distribution of the Army has changed substantially. In 1980, women represented 9% of the Army population, and by 1994, they represented 13% (18). The average age of women on active duty also increased as more women made careers of military service. Table 3 shows the gender composition of HRA takers and nontakers by year of HRA administration. Female soldiers were slightly more likely to complete HRAs than males (as a proportion of the total Army on active duty) in most years.

Table 3. Proportion of Active-Duty Army HRA Takers and Nontakers, by Gender and by Year of HRA Administration, 1991-1998

Year	HRA Status	N	Unknown (%)	Male (%)	Female (%)
1991	Takers	74,534	0.1	88.6	11.4
	Nontakers	533,219	1.6	87.2	11.3
1992	Takers	92,489	0.3	87.5	12.2
	Nontakers	468,754	1.7	86.8	11.5
1993	Takers	59,325	0.1	87.2	12.8
	Nontakers	372,978	2.2	85.7	12.1
1994	Takers	50,248	0.1	85.8	14.0
	Nontakers	338,023	2.1	85.2	12.7
1995	Takers	45,436	0.1	84.5	15.4
	Nontakers	313,910	2.1	84.9	13.1
1996	Takers	37,075	0.1	83.7	16.2
	Nontakers	311,896	2.8	83.2	14.0
1997	Takers	31,032	0.6	82.7	16.7
	Nontakers	318,434	1.7	83.2	15.1
1998	Takers	14,827	0.2	83.7	16.1
	Nontakers	339,046	2.3	82.5	15.2

Note: Ns vary among tables in this report because some respondents were missing data on a variable of interest.

With the exception of 1991, soldiers taking an HRA in a given year were more likely to have been on active duty for shorter durations than individuals who did not take it in that year (Table 4). This may be due in part to in-processing being one of the more common reasons for HRA administration. It is noteworthy that the longer an individual remains on active duty, the greater the likelihood that the individual will have taken at least one HRA (data not shown).

Table 4. Active-Duty Army HRA Takers and Nontakers, Mean Time in Service in Months, 1991-1998

Year	HRA Status	N	Mean Time in Service in Months (Range = 0 - 420)
1991	Takers	74,478	90.5
	Nontakers	525,051	84.7
1992	Takers	92,475	86.4
	Nontakers	461,276	87.2
1993	Takers	59,303	77.1
	Nontakers	365,229	84.9
1994	Takers	50,197	70.7
	Nontakers	331,410	83.7
1995	Takers	45,420	74.4
	Nontakers	307,976	82.1
1996	Takers	37,051	64.5
	Nontakers	303,548	76.1
1997	Takers	31,013	51.4
	Nontakers	313,699	71.1
1998	Takers	14,812	51.8
	Nontakers	331,582	67.2

Note: Ns vary among tables in this report because some respondents were missing data on a variable of interest.

With the exception of 1991, HRA takers were generally more likely to be single than nontakers (see Table 5).

Table 5. Active-Duty Army HRA Takers and Nontakers, Proportionally by Marital Status and by Year of HRA Administration, 1991-1998

Year	HRA Status	N	Unknown	Single	Married	No Longer Married
1991	Takers	74,534	0.4	38.5	57.0	4.1
	Nontakers	533,219	4.4	41.0	50.8	3.8
1992	Takers	92,489	13.1	40.6	42.5	3.9
	Nontakers	468,754	7.2	39.7	48.3	4.0
1993	Takers	59,325	1.3	43.5	51.4	3.8
	Nontakers	372,978	2.4	40.3	53.4	3.9
1994	Takers	50,248	0.3	44.8	51.1	3.8
	Nontakers	338,023	2.4	40.2	53.5	3.9
1995	Takers	45,436	0.3	43.2	52.5	4.0
	Nontakers	313,910	2.2	41.4	52.6	3.8
1996	Takers	37,075	0.2	48.9	47.3	3.6
	Nontakers	311,896	3.1	43.4	49.8	3.7
1997	Takers	31,032	0.6	55.0	41.0	3.3
	Nontakers	318,434	1.8	46.4	48.1	3.7
1998	Takers	14,827	0.4	55.8	40.7	3.0
	Nontakers	339,046	2.5	48.8	45.2	3.5

Note: Ns vary among tables in this report because some respondents were missing data on a variable of interest.

During the years 1993-1998, HRA takers were more likely to have no dependents than their HRA nontaker counterparts (see Table 6). This may reflect the fact that HRA takers in this time period were also more likely to be single.

As a rule, there are more enlisted soldiers than officers in the Army. Between 1980 and 1994, the proportional split between enlisted soldiers and officers was approximately 85/15 (18). Data shown in Table 7 indicate rank was not strongly correlated with whether or not an individual completed an HRA. It does appear, however, that lower ranking enlisted soldiers (E1-E4) comprised an increasing proportion of the HRA takers over time. This may also reflect the fact that in later years of survey administration surveys may have been offered more frequently during in-processing and thus captured slightly more single soldiers with less time on active duty..

Table 8 reveals little bias in the distribution of HRAs by race/ethnicity. Surveys administered after 1996 may slightly oversample from minority racial/ethnic groups.

Table 9 documents the reason why individuals took an HRA, among soldiers who took the HRA only once in their active-duty career compared to soldiers who took the HRA more than once. The most common mechanism for HRA administration for first time HRA takers was in-processing to a new base or job assignment, followed by physical exam and individuals selecting "other" as their reason for taking the HRA. Administration for other reasons might include surveys administered to a unit at the request of the command and surveys administered to individuals during outpatient

encounters. Among soldiers taking a second HRA the most common cause for survey administration was “Periodic Physical Exam” for early years and, after 1993, “In-Processing.” Repeat survey takers were more likely than first time HRA takers to say they were being administered an HRA for “other” reasons than those listed.

Table 10 shows reason for taking the HRA for first-time HRA takers, for the entire sample, and stratified by year, age, gender, race, and rank. From 1991-1997, the proportion of respondents who took an HRA during in-processing increased in an almost linear fashion from 47% to 81%. Then in 1998, this proportion decreased sharply to 71%. The percentage taking an HRA as part of a periodic physical exam fluctuated from a high of 22% in both 1991 and 1995 to a low of 7% in 1998. Taking the HRA for “other” reasons tended to decrease over time from 19% in 1991 to 8% in 1997; however, in 1998, it increased to 20%. There were only small gender and racial differences in reasons for taking the HRA. However, there were wide variations across age and rank, and these differences followed expected patterns. Younger and lower-ranking soldiers were more likely to complete an HRA during in-processing; in contrast, older and higher-ranking soldiers were more likely to complete one during a periodic physical exam. Older respondents were also more likely than their younger counterparts to report taking an HRA for “other” reasons.

Table 6. Active-Duty Army HRA Takers and Nontakers, Proportionally by Number of Dependents and by Year of Administration, 1991-1998

Year	HRA Status	N	Unknown	Member only	Member +1	Member +2	Member +3	Member +4	Member +5	Member +6	Member +7	Member +8-15
1991	Takers	74,534	0.3	40.7	16.1	15.5	16.8	7.5	2.4	0.6	0.2	0.1
	Nontakers	533,219	1.8	43.4	17.1	14.6	14.3	6.1	2.0	0.5	0.1	0.1
1992	Takers	92,489	0.2	42.9	15.9	14.8	16.3	7.1	2.2	0.5	0.2	0.1
	Nontakers	468,754	1.7	42.2	17.0	14.9	14.9	6.5	2.1	0.5	0.2	0.1
1993	Takers	59,325	0.6	45.4	15.6	14.4	15.1	6.3	2.0	0.4	0.2	0.1
	Nontakers	372,978	2.4	42.8	16.9	14.6	14.6	6.2	2.0	0.5	0.1	0.1
1994	Takers	50,248	1.1	46.5	16.2	14.2	14.0	5.7	1.8	0.4	0.1	0.1
	Nontakers	338,023	2.1	42.9	17.1	14.7	14.5	6.1	1.9	0.4	0.1	0.1
1995	Takers	45,436	0.1	45.9	16.3	14.6	14.6	6.1	1.8	0.4	0.1	0.0
	Nontakers	313,910	2.0	43.9	17.1	14.6	14.1	5.9	1.8	0.4	0.1	0.1
1996	Takers	37,075	0.1	50.9	15.5	13.6	12.8	5.2	1.6	0.3	0.1	0.0
	Nontakers	311,896	2.8	46.0	16.7	14.0	13.2	5.3	1.6	0.4	0.1	0.0
1997	Takers	31,032	0.2	56.8	15.0	12.4	10.4	3.9	1.1	0.3	0.1	0.0
	Nontakers	318,434	1.7	48.8	16.4	13.7	12.6	5.0	1.5	0.3	0.1	0.0
1998	Takers	14,827	0.3	57.3	15.7	12.1	9.7	3.5	1.1	0.3	0.1	0.0
	Nontakers	339,046	2.4	51.0	15.9	12.8	11.6	4.5	1.4	0.3	0.1	0.0

Note: Ns vary among tables in this report because some respondents were missing data on a variable of interest.

Table 7. Active-Duty Army HRA Takers and Nontakers, Proportionally by Rank and by Year of HRA Administration, 1991-1998

Year	HRA Status	N	Unknown	Enlisted Unknown	E1-E4	E5-E9	Warrant Officer	Officer Unknown	O1-O3	O4-O5	O6-O11
1991	Takers	74,534	0.1	0.0	45.8	39.4	2.0	0.0	6.9	5.0	0.8
	Nontakers	533,219	1.5	0.0	53.3	33.0	1.8	0.0	6.6	3.2	0.7
1992	Takers	92,489	0.0	0.0	48.8	37.5	2.1	0.0	6.5	4.3	0.8
	Nontakers	468,754	1.6	0.0	51.5	34.1	1.8	0.0	6.9	3.5	0.7
1993	Takers	59,325	0.0	0.0	51.2	34.4	1.8	0.0	7.9	4.0	0.7
	Nontakers	372,978	2.1	0.0	51.1	33.3	2.0	0.0	7.1	3.7	0.8
1994	Takers	50,248	0.1	0.0	53.7	30.9	1.8	0.0	9.3	3.7	0.5
	Nontakers	338,023	2.0	0.0	51.6	33.0	2.0	0.0	7.1	3.6	0.7
1995	Takers	45,436	0.0	0.0	52.4	32.1	2.3	0.0	8.8	3.9	0.5
	Nontakers	313,910	1.9	0.0	53.4	31.1	2.0	0.0	7.3	3.6	0.6
1996	Takers	37,075	0.1	0.0	57.3	26.5	1.6	0.0	9.8	4.2	0.4
	Nontakers	311,896	2.7	0.0	54.5	29.4	1.9	0.1	7.4	3.4	0.6
1997	Takers	31,032	0.1	0.0	66.3	23.0	1.5	0.1	7.1	1.9	0.2
	Nontakers	318,434	1.5	0.1	57.2	28.2	1.8	0.1	7.4	3.2	0.6
1998	Takers	14,827	0.1	0.1	65.6	22.6	1.4	0.1	7.8	2.1	0.2
	Nontakers	339,046	2.2	0.0	59.4	25.8	1.7	0.1	7.3	3.1	0.5

Note: Ns vary among tables in this report because some respondents were missing data on a variable of interest.

Table 8. Active-Duty Army HRA Takers and Nontakers, Proportionally by Race/Ethnicity and by Year of HRA Administration, 1991-1998

Year	HRA Status	N	Unknown	White	Black	Hispanic	Indian/ Alaskan	Asian/ Pacific Islander	Other
1991	Takers	74,534	0.1	62.0	31.3	3.1	0.5	1.2	1.9
	Nontakers	533,219	1.6	63.4	26.5	4.0	0.6	1.7	2.4
1992	Takers	92,489	0.0	62.5	28.3	4.4	0.6	1.9	2.3
	Nontakers	466,754	1.6	62.5	26.8	4.2	0.6	1.8	2.6
1993	Takers	59,325	0.1	63.7	26.2	5.1	0.6	2.1	2.3
	Nontakers	372,978	2.2	62.5	25.8	4.5	0.6	1.9	2.6
1994	Takers	50,248	0.1	63.7	26.1	5.1	0.6	2.2	2.3
	Nontakers	338,023	2.1	62.3	25.4	4.8	0.6	2.0	2.8
1995	Takers	45,436	0.1	62.8	26.1	5.6	0.6	2.4	2.5
	Nontakers	313,910	2.1	62.0	25.0	5.2	0.6	2.2	3.0
1996	Takers	37,075	0.1	62.1	26.0	6.2	0.6	2.5	2.4
	Nontakers	311,896	2.9	60.9	24.5	5.8	0.7	2.4	3.0
1997	Takers	31,032	0.1	59.6	26.0	8.3	0.7	2.6	2.6
	Nontakers	318,434	1.7	60.8	24.6	6.8	0.7	2.5	2.9
1998	Takers	14,827	0.2	60.5	25.1	8.2	0.8	2.9	2.3
	Nontakers	339,046	2.4	59.8	24.3	7.4	0.7	2.7	2.7

Note: Ns vary among tables in this report because some respondents were missing data on a variable of interest.

Table 9. Reason for Taking the HRA Among Soldiers Taking the HRA Only Once in Their Active Duty Career compared to Reason for Taking HRA Among Multiple HRA Takers, by Year of HRA Administration, 1991-1998

Year	HRA Status	N	Missing Data (%)	In-Processing (%)	Periodic Physical Exam (%)	Pre-Physical Fitness Test (%)	Occupational Health Program (%)	Walk-in (%)	Other (%)
1991	First HRA	50,717	1.4	48.1	20.9	0.9	3.3	7.1	18.4
	All Others	26,725	1.7	42.4	24.7	1.0	4.0	6.8	19.4
1992	First HRA	65,331	1.5	55.3	19.6	0.5	2.3	4.2	16.7
	All Others	38,444	1.9	44.5	25.6	0.9	3.4	4.2	19.6
1993	First HRA	43,444	1.1	58.1	17.0	0.5	2.4	3.3	17.6
	All Others	32,228	1.3	42.7	24.6	0.8	2.9	2.8	24.9
1994	First HRA	39,195	0.6	63.8	16.2	0.8	1.8	1.1	15.7
	All Others	30,309	0.8	43.5	25.3	1.3	4.3	1.5	23.4
1995	First HRA	38,710	0.7	62.8	21.2	0.7	2.2	0.9	11.5
	All Others	27,117	0.8	44.3	30.0	1.0	5.5	1.4	17.1
1996	First HRA	33,065	1.7	72.9	13.8	0.5	2.0	0.9	8.3
	All Others	23,037	1.9	50.7	25.6	0.8	4.8	1.3	14.9
1997	First HRA	29,122	0.6	82.3	8.8	0.2	0.9	0.5	6.8
	All Others	17,320	0.5	55.6	24.7	0.5	3.3	0.9	14.6
1998	First HRA	14,510	1.0	70.8	6.4	0.2	0.6	0.7	20.2
	All Others	8,188	0.7	48.8	23.8	0.5	1.9	1.6	22.8

Note: Ns vary among tables in this report because some respondents were missing data on a variable of interest.

Table 10. Reason for Taking the HRA by Year and Demographic Characteristics Among All HRA Takers¹, 1991-1998

	N	Missing Data (%)	Reason for Taking HRA					
			In-Process (%)	Periodic Physical Exam (%)	Pre-Physical Fitness Test (%)	Occupational Health Program (%)	Walk-In (%)	Other (%)
Total sample	404,966	1.2	59.3	18.1	0.7	2.4	3.1	15.4
Year								
1991	74,534	1.5	46.8	21.8	0.9	3.5	7.0	18.6
1992	92,489	1.5	54.3	20.3	0.6	2.5	4.1	16.8
1993	59,325	1.2	57.4	17.3	0.6	2.5	3.1	18.0
1994	50,248	0.7	62.1	16.9	0.9	2.1	1.2	16.2
1995	45,436	0.7	61.1	22.3	0.7	2.2	1.0	12.0
1996	37,075	1.6	71.3	14.6	0.5	2.0	0.9	9.0
1997	31,032	0.6	80.7	9.5	0.2	0.9	0.5	7.6
1998	14,827	1.0	70.7	6.7	0.2	0.7	0.7	20.0
Gender								
Male	349,316	1.2	59.3	18.1	0.6	2.3	3.2	15.4
Female	54,895	1.2	58.7	18.1	1.2	2.7	2.6	15.5
Race								
White	252,826	1.1	59.4	18.2	0.6	2.4	3.0	15.4
Black	111,432	1.3	58.3	18.4	0.8	2.5	3.4	15.3
Hispanic	20,631	1.4	64.5	14.7	0.5	1.9	2.7	14.4
Other	19,681	1.5	57.6	18.7	0.8	2.1	3.1	16.3
Age								
<21	64,088	1.0	83.9	3.5	0.3	1.0	2.0	8.3
21-25	131,102	1.0	68.5	9.5	0.5	2.1	3.3	15.1
26-30	79,825	1.0	57.2	18.4	0.6	2.4	3.5	16.9
31-35	56,086	1.0	48.7	25.7	0.6	3.0	3.5	17.5
36-40	44,877	1.7	36.3	36.0	0.9	3.3	3.0	18.8
>40	28,135	2.6	23.8	46.9	1.8	3.8	2.8	18.4
Rank								
E1-E4	211,920	1.0	73.7	7.3	0.5	1.8	3.0	12.8
E5-E9	134,877	1.4	44.5	27.2	0.8	2.9	3.6	19.7
WO ²	7,656	1.2	34.2	47.7	0.8	2.3	2.3	11.6
O1-O3	31,511	0.8	53.4	23.8	0.7	2.5	2.1	16.7
O4-O5	16,156	2.1	25.3	50.4	1.4	5.5	2.1	13.3
O6-O11	2,538	2.7	10.5	66.4	1.1	5.9	1.2	12.2

¹Among soldiers who took more than one HRA while on active duty, demographic data from the date of the first HRA

²Warrant Officer

Note: Ns vary among tables in this report because some respondents were missing data on a variable of interest.

DOES THE HRA OVERSAMPLE FROM HIGH-RISK POPULATIONS OF SOLDIERS?

Because the HRA is not offered to a random sample of soldiers, it is possible that it may oversample from those who are less healthy or who take greater risks with their health. That is, those who encounter the health care system may have more opportunities to take the HRA and those who engage in high-risk behaviors and are thus at greater risk for injury or illness might be more likely to be offered the survey by health care personnel or concerned commanders. To check for this we compared the hospitalization histories of HRA takers and nontakers in the year prior to their taking the HRA. For a given year we matched each HRA taker with an HRA nontaker who had been on active duty for at least one year prior to the date of the HRA. We then compared rates of hospitalization for any cause and rates of injury hospitalizations in the prior year for these two groups. There did not appear to be large differences in hospitalizations for HRA takers and HRA nontakers. However, nontakers were marginally more likely to be hospitalized in most years. Also noteworthy is the appreciable decline in hospitalizations over time for both groups (see Table 11).

Table 11. Proportions of Active-Duty Army HRA Takers and Nontakers Hospitalized for Any Cause and for Injury in Year Prior to HRA Administration, 1991-1998

Year	HRA Status	N	Any Hospitalization (%)	No Hospitalization (%)	Injury Hospitalization (%)	No Injury Hospitalization (%)
1991	Takers	35,711	9.7	90.3	1.2	98.9
	Nontakers	610,485	9.8	90.3	1.4	98.6
1992	Takers	44,416	9.2	90.8	1.1	98.9
	Nontakers	576,606	9.7	90.3	1.6	98.4
1993	Takers	31,866	9.3	90.8	1.1	98.9
	Nontakers	488,363	9.6	90.4	1.2	98.8
1994	Takers	27,278	9.4	90.6	0.9	99.1
	Nontakers	465,981	9.9	90.1	1.2	98.8
1995	Takers	26,320	7.3	92.7	0.6	99.4
	Nontakers	441,022	7.2	92.8	0.9	99.1
1996	Takers	18,001	2.6	97.4	0.2	99.8
	Nontakers	419,620	2.7	97.3	0.3	99.7
1997	Takers	11,270	8.2	91.8	0.7	99.3
	Nontakers	397,802	8.5	91.5	0.9	99.1
1998	Takers	6,799	5.5	94.5	0.7	99.3
	Nontakers	398,577	5.5	94.5	0.7	99.3

Table 12 displays reasons for separation from service among HRA takers and nontakers after 1991. Among soldiers who were discharged after 1991, the most common reason for discharge among both HRA takers and nontakers was expiration of term of service. Soldiers who had completed an HRA appear slightly more likely to have been discharged in order to attend school or to enter an officer commissioning program. They were also more likely to stay on active duty long enough to attain retirement than were their peers who did not complete an HRA.

Table 12. Reason for Discharge Among Active-Duty Army HRA Takers and Nontakers Discharged between 1991-1998

Discharge Reason	% Takers (N=229,227)	% Nontakers (N=648,025)
Unknown/Invalid	0.3	0.3
Expiration of Term of Service	31.7	29.6
Early Release—To Attend School	2.1	1.2
Early Release—Police Duty	0.0*	0.0*
Early Release—Insufficient Retainability	0.1	0.2
Early Release—In the National Interest	3.4	2.9
Early Release—Seasonal Employment	0.0*	0.0*
Early Release—To Teach	0.0	0.0
Early Release—Other (Including RIF/VSI/SSB)	10.3	11.5
Involuntary—Other Reasons (Officer)	0.1	0.2
Conditions Existing Prior to Service	0.2	0.7
Disability—Severance Pay	3.3	2.7
Permanent Disability—Retired	0.4	0.4
Temporary Disability—Retired	0.8	0.8
Disability-Non EPTS—No Severance Pay	0.1	0.1
Disability—Title 10 Retirement	0.0*	0.0*
Unqualified for Active Duty—Other	0.1	4.1
Failure to meet Weight/Body Fat Standards	2.2	2.0
Dependency of Hardship	1.3	1.4
Death: Battle Casualty	0.0	0.0
Death: Non-Battle—Disease	0.0	0.0
Death: Non-Battle—Other	0.3	0.3
Death: Cause Not Specified	0.0	0.0
Officer Commissioning Program	3.5	1.1
Warrant Officer Program	0.0*	0.0*
Service Academy	0.1	0.1
Retirement: 20–30 Years of Service	18.1	10.5
Retirement: Over 30 Years of Service	0.0	0.0
Retirement: Other Categories	3.3	1.4
Failure of Selection for Promotion—Retired (Officer)	0.0	0.0
Character/Behavior Disorder	0.7	1.1
Motivation/Substandard Performance	0.0	0.0
Enuresis	0.0*	0.0*
Inaptitude/Fail Course of Instruction	0.0	0.0
Alcoholism	0.4	0.5
Discreditable Incident	1.5	0.0*
Shirking	0.0*	1.1
Drugs	0.9	0.9
Financial Irresponsibility	0.0*	0.0*
Lack of Dependent Support	0.0*	0.0*
Unsanitary Habits	0.0*	0.0*

Discharge Reason	% Takers (N=229,227)	% Nontakers (N=648,025)
Civil Court Conviction	0.1	0.1
Security	0.0	0.0
Court Martial	0.2	0.4
Fraudulent Entry	0.0	0.3
AWOL	0.1	0.2
Homosexuality	0.1	0.2
Sexual Perversion	0.0*	0.0*
Good of the Service	1.4	2.4
Juvenile Offender	0.3	0.3
Misconduct/Unsuitability	0.4	0.9
Unfitness/Unacceptable Conduct	0.1	0.1
Unsuitability Unknown	0.1	0.1
Pattern of Disciplinary Infraction	0.1	0.1
Commission of Serious Offense	1.3	1.6
Failure to Meet Qualifications	3.3	2.9
Unsatisfactory Performance	2.4	2.9
Trainee Discharge	0.2	6.5
Failure to Participate (Applies to Reservists)	0.0*	0.0*
Secretarial Authority	0.8	1.4
Erroneous Enlistment or Induction	0.0	0.1
Sole Surviving Family Member	0.0	0.0
Marriage	0.0*	0.0*
Pregnancy	1.2	1.4
Underage (Minor)	0.0*	0.0
Conscientious Objector	0.0	0.0
Parenthood	1.4	1.0
Breach of Contract	0.0	0.1
Other	0.1	0.1
Immediate Reenlistment	0.1	0.0
Dropped from Strength for Desertion	0.3	0.6
Dropped from Strength for Imprisonment	0.4	0.5
Record Correction	0.1	0.2
Dropped from Strength as MIA/POW	0.0*	0.0
Other Dropped from Strength/the Rolls	0.2	0.7

*=Empty Cell

WHICH RESPONDENTS SKIP SENSITIVE QUESTIONS ON THE HRA?

The HRA asks several questions that may be considered sensitive (see Table 13). A small proportion (2.6%) of soldiers skipped at least one sensitive item on the HRA. Less than 1% of soldiers skipped all of them.

Table 13. Potentially Sensitive Questions on the Army's Health Risk Appraisal and Proportion of Respondents Missing Answers to these Items, 1991-1998 *

Item	Response Options	Percent Missing
27. How many times in the past month did you drive or ride when the driver had perhaps too much alcohol to drink?	Range, 0 – 59	1.2%
28. How many drinks of alcoholic beverages do you have in a typical week?	Range, 0 – 99	1.3%
45. Have you seriously considered suicide within the last two years?	yes; yes, within last year; yes, within last 2 months; no	0.8%
48. How often has life been so overwhelming in the last year that you seriously considered hurting yourself?	often; sometimes; seldom; never	0.8%
49. In the past year, how often have you experienced repeated or long periods of depression?	often; sometimes; seldom; never	0.8%

* Excludes six alcohol-related items that respondents to the 1990 version of the form were instructed to skip if they did not drink.

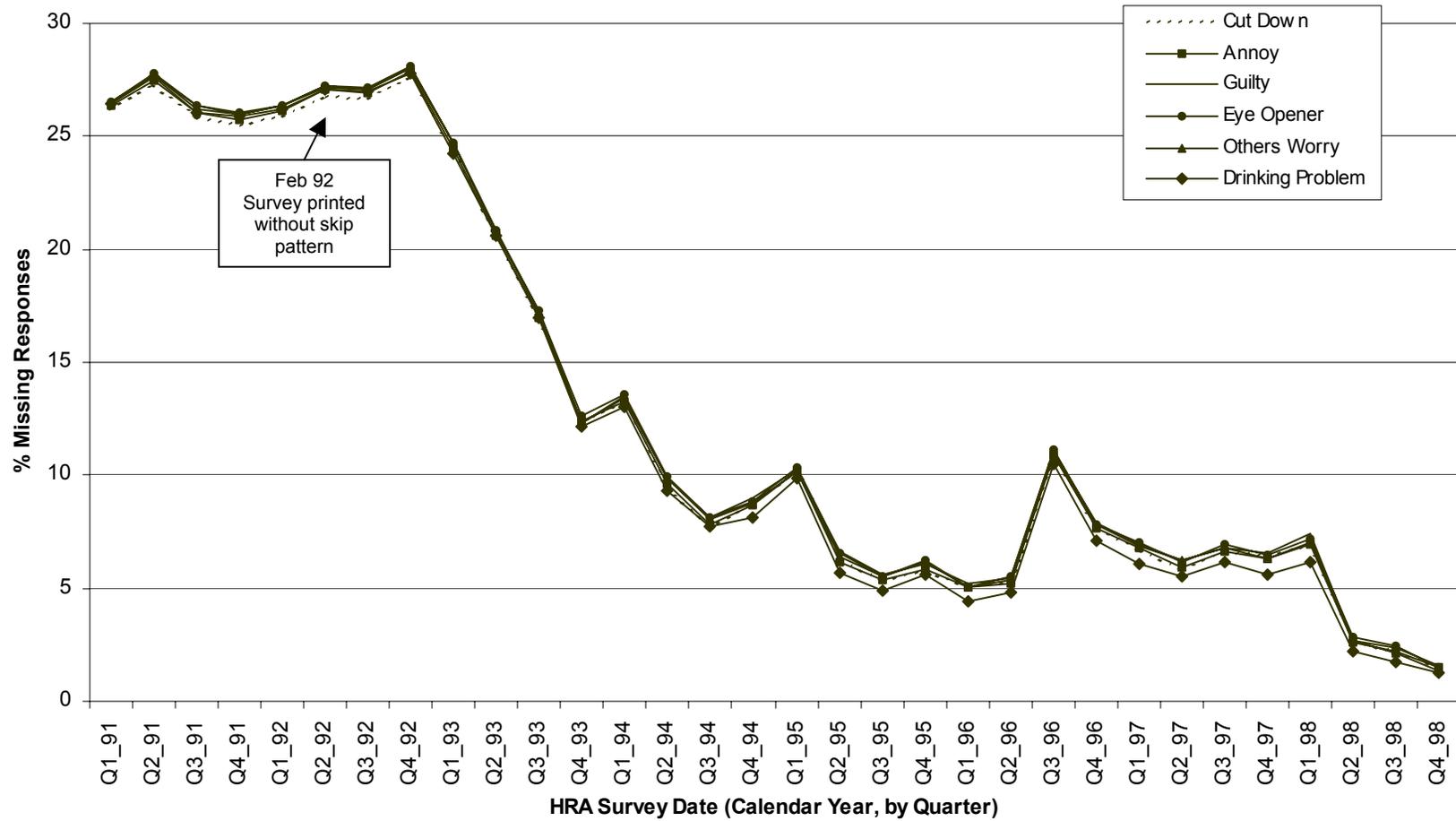
Table 14 compares the demographic characteristics of first-time HRA takers who skipped one or more items, as compared to all first-time HRA takers. Soldiers who skipped at least one of these items appear slightly more likely to be warrant officers or higher ranking enlisted or officers. Soldiers who skipped items also appear to be slightly likely to be older, of minority race, and to be either married, divorced, or widowed.

Table 14. Demographic Profile of Active-Duty HRA Takers Who Skipped at Least One Sensitive HRA Item on the Army's HRA, Compared to All HRA Takers, 1991-1998

	% Takers Who Skipped at Least One Item (N=10,582)	% All Takers (N=404,966)
Gender		
Missing/Unknown	0.1	0.2
Male	86.3	86.3
Female	13.6	13.6
Age		
Missing/Unknown	0.3	0.2
<21	15.8	15.8
21-25	28.8	32.4
26-30	17.3	19.7
31-35	12.2	13.9
36-40	14.0	11.1
>40	11.7	7.0
Grade		
Missing/Unknown	0.0	0.1
E1-E4	50.5	52.3
E5-E9	36.0	33.3
Warrant Officer	2.1	1.9
O1-O3	5.4	7.8
O4-O5	5.0	4.0
O6-O11	1.0	0.6
Race/Ethnicity		
Missing/Unknown	0.1	0.1
White	54.2	62.4
Black	34.4	27.5
Hispanic	5.8	5.1
American Indian/Alaskan Native	0.5	0.6
Asian/Pacific Islander	2.7	2.0
Other	2.5	2.3
Marital Status		
Missing/Unknown	3.9	3.4
Single	41.6	43.9
Married	50.4	48.9
No longer married	4.1	3.8

As noted previously, the HRA was modified in 1992 to delete the skip instruction directing nondrinkers to skip six potentially sensitive items concerning alcohol-related problems. Figure 5 shows the decline, over time, in the proportion of HRA respondents who were missing responses to these items. The decline begins in 1992, when the new survey (without the skip instruction) was initially disseminated and continued quite steeply until 1994, when the decline in missing responses appears to level off, demonstrating the impact of this skip instruction on the quality or completeness of the alcohol-related data in the earlier years.

Figure 5. Proportion of HRA Respondents Missing Responses to Alcohol Items, 1991-1998



It is difficult to discern which soldiers skipped sensitive items about alcohol-related problems because they were simply following the skip instructions that directed nondrinkers to skip and which soldiers may have skipped these items because they were reluctant to disclose this information. Table 15 compares the demographic characteristics of all HRA takers to those respondents who were missing responses to more than one of the alcohol-related items. Compared to the demographic profile of the total population, a greater proportion of respondents who skipped the drinking quantity item and one or more of the alcohol-related problem items were older (i.e., 36+ years or older), African-American, and higher-ranking enlisted. Of particular importance is the last column showing the demographic composition of respondents who indicated that they were nonabstainers (that is, they reported consuming at least one drink per week) but nonetheless skipped items 29-34 (the items about alcohol-related problems). These respondents ought to have responded to the items about alcohol-related problems, regardless of which version of the survey they took. When we compare the demographic profile of these nonabstainers who skipped the drinking problem items to nonabstainers who answered these items, there seems to be a slightly higher proportion of women who skip these items. In addition, the association between race/ethnicity and skipping alcohol items appears slightly more pronounced.

Table 15. Demographics of Respondents Missing HRA Alcohol Items Compared to the Total Population ^{1,2,3}

	All Respondents (N=404,966) (%)	Answered All Alcohol Items (N=326,011) (%)	Nonabstainers Answering All Alcohol Items (N=217,813) (%)	Missing 1+ Yes/No Items		
				Missing Drinks/Week (N=2,684) (%)	Abstainers (N=68,962) (%)	Non-abstainers (N=3,558) (%)
Gender						
Male	86.3	87.3	90.0	85.7	81.2	88.5
Female	13.6	12.5	9.8	14.3	<u>18.6</u>	11.4
Race						
White	62.4	64.6	67.2	51.3	53.2	53.4
Black	27.5	25.5	23.7	<u>35.8</u>	<u>36.0</u>	<u>35.6</u>
Hispanic	5.1	5.0	4.6	6.2	5.3	5.6
Other	4.9	4.7	4.4	6.6	5.5	5.4
Age	15.8	14.7	10.6	14.2	<u>21.4</u>	13.7
<21	32.4	33.7	36.5	21.7	26.5	33.7
21-25	19.7	20.3	21.4	14.3	17.4	19.9
26-30	13.9	13.9	14.1	10.8	13.8	12.8
31-35	11.1	10.7	10.6	<u>19.4</u>	12.5	12.2
36-40	7.0	6.5	6.7	<u>19.4</u>	8.3	7.5
>40						
Rank	52.3	52.4	50.4	41.5	52.6	53.5
E1-E4	33.3	32.4	32.9	<u>42.3</u>	37.2	34.2
E5-E9	1.9	1.9	2.0	2.8	1.7	1.5
WO	7.8	8.5	9.3	4.8	5.0	6.0
O1-O3	4.0	4.1	4.6	6.7	3.2	4.0
O4-O5	0.6	0.7	0.8	1.9	0.4	0.8
O6-O11						

¹ Percentages at least 5% larger than those in the "All Respondents" column are underlined for the Missing Drinks/Week and Abstainers columns. Non-abstainers missing responses were compared to nonabstainers answering all alcohol items.

² Percentages may not add to 100% due to a small proportion of missing data.

³ Respondents reporting drinking zero drinks per week were coded as "abstainers" for this analysis. Respondents reporting drinking 1 or more drinks per week were coded as "nonabstainers."

WHICH SOLDIERS REPORT EXTREME VALUES FOR SENSITIVE ITEMS?

Because these HRA alcohol and mental health items (see Table 13 above) are somewhat sensitive in nature and the survey is not administered anonymously, we are interested in soldiers reporting excessive or extreme values. Tables 16-19 show the demographic profile for soldiers reporting extreme values on the sensitive items listed above in Table 13.

Extreme values, sometimes discarded and labeled “outliers” by researchers, could be the result of error when reporting responses or they could reflect real values. Discarding this information without some investigation might result in a flawed picture of the true health status of certain respondents. One way to evaluate the authenticity of these responses is to look for consistency across items. For example, if a respondent truly drinks excessive amounts of alcohol, as they report, we would also expect them to report other health and social problems.

Table 16 shows the demographic profile of soldiers responding in the top percentile of values for the drinking and driving (more than nine times per month) and the weekly drinking item (regularly consuming more than 30 drinks per week). Compared to other HRA takers, these soldiers are disproportionately male, young (under age 26), lower-ranking enlisted, white, and single.

Table 16. Demographic Profile of Active-Duty HRA Takers Responding in the Top Percentile for HRA Items Concerning Drinking and Driving and Number of Alcoholic Drinks Consumed Per Week, Compared to All HRA Takers, 1991-1998

	Demographic composition of Takers who are in Top Percentile for Drinking and Driving & Number of Drinks per Week (N=932)	Demographic Composition of All Takers (N=404,966)
Gender (%)		
Missing/Unknown	0.2	0.2
Male	98.1	86.3
Female	1.7	13.6
Age (%)		
Missing/Unknown	0.1	0.2
<21	21.8	15.8
21-25	57.4	32.4
26-30	11.4	19.7
31-35	4.5	13.9
36-40	3.3	11.1
>40	1.5	7.0
Grade (%)		
Missing/Unknown	0.1	0.1
E1-E4	82.2	52.3
E5-E9	17.0	33.3
Warrant Officer	0.2	1.9
O1-O3	0.1	7.8
O4-O5	0.2	4.0
O6-O11	0.2	0.6
Race/Ethnicity (%)		
Missing/Unknown	0.2	0.1
White	74.7	62.4
Black	19.3	27.5
Hispanic	3.7	5.1
American Indian/Alaskan Native	0.4	0.6
Asian/Pacific Islander	0.5	2.0
Other	1.2	2.3
Marital Status (%)		
Missing/Unknown	1.8	3.4
Single	71.7	43.9
Married	23.6	48.9
No longer married	2.9	3.8

Table 17 shows the demographic characteristics of survey respondents who admitted they had seriously contemplated suicide at some point within the past two years. This group included more female soldiers and more young soldiers (aged 25 and younger). Lower ranking enlisted, white, and single soldiers were also over-represented in this group.

Table 17. Demographic Profile of Active-Duty HRA Takers Who Reported Any Level of Suicidal Ideation, Compared to All HRA Takers, 1991-1998

	Demographic Composition of Takers Reporting Any Level of Suicidal Ideation (N=10,594)	Demographic Composition of All Takers (N=404,966)
Gender (%)		
Missing/Unknown	0.3	0.2
Male	83.3	86.3
Female	16.4	13.6
Age (%)		
Missing/Unknown	0.4	0.2
<21	29.5	15.8
21-25	40.6	32.4
26-30	13.5	19.7
31-35	7.6	13.9
36-40	5.7	11.1
>40	2.6	7.0
Grade (%)		
Missing/Unknown	0.3	0.1
E1-E4	76.9	52.3
E5-E9	20.5	33.3
Warrant Officer	0.3	1.9
O1-O3	1.3	7.8
O4-O5	0.8	4.0
O6-O11	0.1	0.6
Race/Ethnicity (%)		
Missing/Unknown	0.3	0.1
White	65.9	62.4
Black	23.7	27.5
Hispanic	5.0	5.1
American Indian/Alaskan Native	0.8	0.6
Asian/Pacific Islander	2.1	2.0
Other	2.2	2.3
Marital Status (%)		
Missing/Unknown	2.8	3.4
Single	60.8	43.9
Married	33.0	48.9
No longer married	3.4	3.8

While women are over-represented among active-duty HRA takers who reported ever contemplating suicide, the difference in suicidal ideation by gender among HRA takers who had more *recently* contemplated suicide is less pronounced. The age difference, however, is more pronounced with young soldiers more likely to say they had contemplated suicide within the past two months (see Table 18).

Table 18. Demographic Profile of Active-Duty HRA Takers Reporting Suicidal Ideation Within the Last Year and Within the Last Two Months, Compared to All HRA Takers, 1991-1998

	Demographic Composition of Respondents Reporting Contemplating Suicide Within the Last Year (N=3,470)	Demographic Composition of Respondents Reporting Contemplating Suicide Within the Last Two Months (N=1,442)	Demographic Composition of All Takers (N=404,966)
Gender (%)			
Missing/Unknown	0.4	0.4	0.2
Male	81.5	83.8	86.3
Female	18.2	15.8	13.6
Age (%)			
Missing/Unknown	0.4	0.4	0.2
<21	26.9	29.7	15.8
21-25	39.4	40.3	32.4
26-30	15.6	14.2	19.7
31-35	8.7	8.0	13.9
36-40	6.0	5.7	11.1
>40	3.1	1.8	7.0
Grade (%)			
Missing/Unknown	0.3	0.2	0.1
E1-E4	73.7	77.1	52.3
E5-E9	23.3	20.2	33.3
Warrant Officer	0.4	0.3	1.9
O1-O3	1.6	1.5	7.8
O4-O5	0.7	0.8	4.0
O6-O11	0.1	0.0	0.6
Race/Ethnicity (%)			
Missing/Unknown	0.3	0.2	0.1
White	63.8	65.3	62.4
Black	25.6	25.2	27.5
Hispanic	5.0	4.3	5.1
American	0.6	1.0	0.6
Indian/Alaskan			
Native			
Asian/Pacific	2.1	1.9	2.0
Islander			
Other	2.7	2.1	2.3
Marital Status (%)			
Missing/Unknown	3.3	2.5	3.4
Single	56.6	58.7	43.9
Married	36.3	35.5	48.9
No longer married	3.8	3.3	3.8

Soldiers who said they often found life so overwhelming they had seriously considered hurting themselves and who often experienced long or prolonged periods of depression in the past year were disproportionately younger (under age 26), female, of lower enlisted ranks, and single (see Table 19).

Table 19. Demographic Profile of Active-Duty HRA Takers Who Report Frequent Bouts of Depression and That Life is Often Overwhelming, Compared to All HRA Takers, 1991-1998

	Demographic Composition of Respondents Reporting Often Feeling Overwhelmed or Depressed (N=1,638)	Demographic Composition of All Takers (N=404,966)
Gender (%)		
Missing/Unknown	0.5	0.2
Male	84.2	86.3
Female	15.3	13.6
Age (%)		
Missing/Unknown	0.6	0.2
<21	29.4	15.8
21-25	41.3	32.4
26-30	14.0	19.7
31-35	7.3	13.9
36-40	5.6	11.1
>40	1.8	7.0
Grade (%)		
Missing/Unknown	0.4	0.1
E1-E4	78.8	52.3
E5-E9	18.3	33.3
Warrant Officer	0.6	1.9
O1-O3	1.6	7.8
O4-O5	0.4	4.0
O6-O11		0.6
Race/Ethnicity (%)		
Missing/Unknown	0.4	0.1
White	61.1	62.4
Black	27.8	27.5
Hispanic	5.0	5.1
American	0.9	0.6
Indian/Alaskan Native		
Asian/Pacific Islander	2.7	2.0
Other	2.1	2.3
Marital Status (%)		
Missing/Unknown	2.6	3.4
Single	61.0	43.9
Married	33.3	48.9
No longer married	3.1	3.8

Soldiers reporting extreme values for alcohol use were also more likely to express suicidal ideation. Eleven percent of respondents reporting weekly alcohol use in the top percentile of the population also reported suicidal ideation as compared with only 2.5% of the population in the 99th percentile of alcohol consumption.¹

¹ Respondents with nonmissing values for alcohol use and suicidal ideation items

DISCUSSION

Numerous Army researchers have recognized that the HRA database is an invaluable tool in surveillance and research. Other researchers have, however, taken different approaches to various aspects of data cleaning and data management and arrived at widely differing numbers of HRA survey responses available for analysis. A series of reports analyzing the HRA database for the years 1991-1995, for example, reported on nearly twice as many HRA surveys in each of those years as the number we included in our analyses (12). For example, the 1991 report of their analyses included 135,158 responses (in contrast to our 74,417). Nearly one-third of the women in their 1991 dataset, however, did not specify a military rank, and approximately one-fourth did not specify a military status. While the proportion of women with undeclared rank and military status was particularly high in that year of their analysis, it typically hovered at approximately 20% of women with undeclared rank and 15% of women with undeclared military status. It is possible that many of these survey responses belonged to dependent spouses or Department of the Army civilian employees, and were not unique responses of active-duty Army soldiers. Our analytic approach sought to evaluate active duty respondents exclusively, and although this reduced the number of surveys available for analysis, we feel more certain that the analyses reported herein reflect the demographic characteristics of HRA respondents who were on active duty at the time of survey administration.

After 1991, younger (i.e., under age 21), single soldiers, with shorter total time in active duty service were slightly more likely to complete an HRA than their older, married counterparts. For 1993 through 1998 they were also more likely to have no dependents. Among this group, the most common reason for taking an HRA was during in-processing to a new base or duty assignment. This phenomenon could be an artifact of the way the HRA was administered. It may be that soldiers who were newer to the military (and thus also younger and single) had more opportunities to complete an HRA as they tend to move more frequently through training courses and to new job assignments. Despite a tendency for the HRA to be administered early in a soldier's career, it is nonetheless the case that the likelihood of ever taking the HRA increased as a soldier's time in service increased.

Though the HRA was not offered to a systematic random sample of soldiers, and though one method of administration was via health clinics, there is no evidence that the HRA oversampled from sicker populations. In fact, nontakers were marginally more likely to be hospitalized in most years than were those taking the HRA. This may be due, in part, to the slight over-representation of younger soldiers among HRA takers, because younger age is associated with lower risk for hospitalization. There was a slight association between taking an HRA and length of active duty service. HRA takers were more likely to stay on active duty long enough to attain retirement than were their peers who did not complete an HRA. This is expected because longevity in the Army increases one's opportunities to take the survey.

Less than 3% of all soldiers skipped at least one of the sensitive items we evaluated from the HRA, and less than 1% skipped all of them. Thus the HRA data are relatively complete, even for potentially sensitive questions. However, a thorough assessment of missing data is hampered by changes in the format of the surveys (including deletion of a skip pattern) that occurred with the form version change in February of 1992, but which may not have been fully implemented until several months, even years, after that date. Because the HRA files do not include a variable that clearly indicates which version of the survey was used by the respondent, it is impossible to determine whether a soldier who completed a survey in 1992 and skipped some of the alcohol items was following a skip instruction or was intentionally avoiding answering sensitive items. Figure 4 showed the rapid drop off in missing responses to these sensitive items about alcohol-related problems, with the decrease in proportion of missing responses leveling off in approximately 1994. It may be that by 1994, most of the surveys being offered to soldiers were the later version. If that were true, then nonabstainers who were missing responses on the items about alcohol-related problems from 1994 and later could be assumed to reflect the true proportion and demographic characteristics of soldiers who intentionally avoid answering alcohol-related questions because of the unique sensitivity of this type of information. The fact that black nonabstainers were slightly more likely to skip the items about alcohol-related problems may suggest that this group, in particular, fears reprisal related to their reported drinking experiences and habits. This may also be true of female and enlisted nonabstainers. However, overall, the proportion of the total population who skip any of the alcohol-related items is quite low.

In spite of the fact that the HRA was not given anonymously, some soldiers reported extreme levels of alcohol use and risky alcohol-related behavior. Results from our cross-sectional analyses showed that 813 soldiers reported consuming more than 30 drinks per week and drinking and driving (or riding with a drunken driver) nine times within the past month. It is possible that these soldiers were exhibiting a form of help-seeking behavior because they knew a medical professional would review their scores. The fact that the extreme alcohol responses also correlates with a positive response on one of the suicidal ideation items lends further evidence that this may be the case. On the other hand, because the HRA survey item on weekly alcohol consumption limits possible responses to 0-99 (as opposed to offering an open-ended response option), it is possible that these more extreme values represent true behaviors (5). For example, young, white males of lower rank were most likely to report extreme values on the drinks per week and drinking and driving scales. Other studies have indicated that this group tends to include more heavy drinkers and risk takers (3, 8, 9). Perhaps they truly are consuming this much alcohol per week or more. Because the response option is limited to 99 we cannot be sure what the true upper range for this value might be. It may be even greater than 99 drinks per week.

Our analyses also expose some of the limitations created when careful thought is not given to the manner in which data are collected and recorded. For example, one issue that may be problematic for researchers using the HRA database is parsing the true identity of the individual taking the survey. The fact that family members taking the survey may use the sponsor's SSN on the form makes it critical that there be no

ambiguity in the questions meant to identify the respondent's military status (i.e., active duty, spouse, retiree, etc). Another issue is establishing the exact date and time the survey was taken. The HRA database contains surveys that bear dates that were before the initiation of the form and surveys that bear dates after the data were received, prima facie evidence of a problem with the date fields. If the date and time had been asked of the respondent rather than relying on a computer date, this problem would have been minimized. Furthermore, accurate dates and times would have greatly simplified the evaluation of duplicate and near duplicate records and improved the accuracy of longitudinal analyses using the HRA as the starting point. Yet another issue is the lack of a version number on the survey form or the version of the software program used to score the survey. If such information were available, analysis of the skip patterns and missing values could have been studied in greater detail.

All of these problems have simple solutions and could be solved in future health surveys. In 1998 the Army began replacing the HRA with the HEAR. Although the HEAR also collects data on health habits, and thus shares some characteristics of the HRA, it is being administered in a different way and for a slightly different purpose. It has not yet been fully implemented. Anecdotal reports suggest that response rates to Version 1.3 of the HEAR were poor. Version 3.0 is still in development and, when it comes online, will be available to all TRICARE Prime beneficiaries; that is active duty service members and the family members who are eligible and enrolled in TRICARE Prime. Like the HRA, the HEAR offers great potential as a research tool. But, as our analyses demonstrate, survey design issues and data collection approaches can negatively impact the utility of health habit survey data for the purposes of epidemiological research. The problems we have identified with the HRA survey are equally relevant to the HEAR and should be considered when refining the HEAR 3.0 instrument.

CONCLUSIONS AND RECOMMENDATIONS

The HRA is a very useful research tool for the study of health behaviors among active duty Army soldiers. It affords an opportunity to analyze trends in risk factors and health behaviors and explore how they may impact health outcomes. Furthermore, because some soldiers were surveyed more than once during their military careers, longitudinal evaluation of behavior change and subsequent effects on health outcomes may also be assessed. Though the HRA was not administered randomly, our analyses demonstrate that there does not appear to be oversampling of soldiers who were more or less sick among HRA takers and nontakers. There is relatively little missing data, even for potentially sensitive questions. While not given anonymously, the survey does elicit a broad range of responses and even some extreme values. This suggests that even if some soldiers may fear reprisals based upon their responses, they are still, nonetheless, reporting behaviors that are potentially dangerous and unhealthy. The wide range of responses may suggest better discriminatory power is possible in identifying specific levels of behaviors associated with certain adverse health outcomes.

There are several challenges involved in understanding and using HRA data for research purposes and, as described in this report, there are important limitations to the

interpretation and generalizability of findings generated from their use. While the strengths and possible uses of the HRA are numerous, these data should not be used without careful consideration of the way they were collected, as well as the many idiosyncrasies of the survey that make qualification and selection of the specific individuals to be studied essential.

First, the HRA database include numerous duplicate and near duplicate records for individual soldiers completing a survey. In addition, the common practice of using an active duty sponsor's SSN when a dependent completed the HRA makes it necessary to carefully evaluate each survey to determine, first, whether the respondent is in fact an active duty servicemember (as opposed to one of his or her dependents) and, second, to determine whether the survey is a duplicate or near duplicate resulting from a repeat scan of the original survey.

Second, researchers who use HRA data must understand that the mechanism by which HRAs were administered was nonrandom and slightly oversampled from some demographic subgroups, and that this oversampling varied from year to year.

Third, though there is very little missing data, minority soldiers appear slightly more likely to skip sensitive items on the survey. There is also a slight over-representation of higher-ranking enlisted soldiers among soldiers who skipped sensitive items on the HRA and possibly more female nonabstainers who skip items regarding dependent or problematic drinking behaviors.

Fourth, young (<26), male, enlisted, white, single respondents were more likely to report extreme values on alcohol use (extreme top percentile of drinking responses). Female, young (<26), lower ranking enlisted, white, and single soldiers were over-represented among those reporting suicidal ideation. While women are over-represented among those who reported ever contemplating suicide, the gender difference in suicidal ideation is less pronounced among those who said they had *recently* contemplated suicide. The age difference, however, is more pronounced in the latter group, with soldiers under the age of 26 being particularly likely to say they had contemplated suicide within the past two months. Young soldiers seem to be particularly at risk not only to adverse outcomes associated with excessive alcohol use but also due to mental health issues. Individuals and demographic subgroups reporting extreme values on high-risk behaviors and experiences should receive more focused attention from researchers and perhaps interventionists. In particular, young soldiers seem to be vulnerable to injury and other adverse outcomes due to unsafe alcohol use and suicidal ideation. This has been well documented in numerous published studies (1-4, 7, 8).

Health behavior surveys are a useful tool not only from a clinical screening perspective but also as part of a comprehensive health surveillance and research program. However, several changes would make the HRA a more useful instrument.

Recommendations

- The HRA or a similar health behavior-screening instrument should be offered routinely and on a random basis to all soldiers.
- There needs to be greater investigation into the reliability and validity of survey responses.
- The disproportionate number of minority, enlisted (particularly higher ranking and older enlisted), and female soldiers who skip sensitive items should be explored, perhaps through focus groups. Anecdotal accounts suggest that soldiers who have been in the military system for a long time may learn to avoid reporting any information that might affect their promotability. Younger, lower ranking soldiers may not have learned this “lesson” by the time they take the HRA.
- The HRA is being phased out and replaced by the HEAR survey. The HEAR should receive early evaluation in terms of its reliability and validity. Adjustments should be made early on to ensure adequate sampling of all Army demographic subgroups. Efforts should be made to avoid the challenges in parceling out the true identities of the survey-takers (i.e., sorting out whether person is an active duty servicemember or family member, sorting out whether it is an original survey or duplicate). A version form field should be added to the HEAR database; in the event that the HEAR form changes, it will thus be easier to determine which version of the form the respondent was answering. The HEAR should also include a date of administration field (rather than reading information in from a system clock that may not have been set properly).
- Surveys of alcohol consumption should not truncate response options or should at least allow for a more generous range of self-reported drinking. In addition, the HRA alcohol use item only asks about typical weekly drinking quantity but does not address frequency. We do not know, for example, whether the weekly drinking reported by respondents is equally spread over seven days or whether the respondent did most of his or her drinking on the weekend. It also lacks an item assessing episodic heavy drinking, or so-called binge drinking, which has been linked with several adverse health and social outcomes (15-17). Future surveys need to improve upon these deficiencies in the alcohol items on the HRA survey. Early versions of the HEAR have made some improvements on these limitations, but there are still some gaps. For example, the HEAR (Version 2.0) binge drinking item appears to be gender-biased in that it asks respondents to report how often in the past twelve months they had six or more drinks on one occasion. Several studies have now shown that for women, even four drinks at a single sitting are associated with the same sorts of adverse health and social outcomes observed among men who consume five or more drinks at a setting. Thus, this binge item will only capture extremely risky drinking for female

soldiers and will miss a potentially larger portion of women whose drinking behavior places them at risk.

- Finally, responses indicative of high risk for mental or physical health problems should receive prompt attention from an appropriately trained care provider.
- Trained survey experts should be consulted at all phases of development for all DoD survey projects. This is essential not only during the creation of the survey, but during pilot testing, implementation, and interpretation of data. This is crucial for obtaining reliable and valid results useful to health promotion specialists, health policy makers, and epidemiologists.

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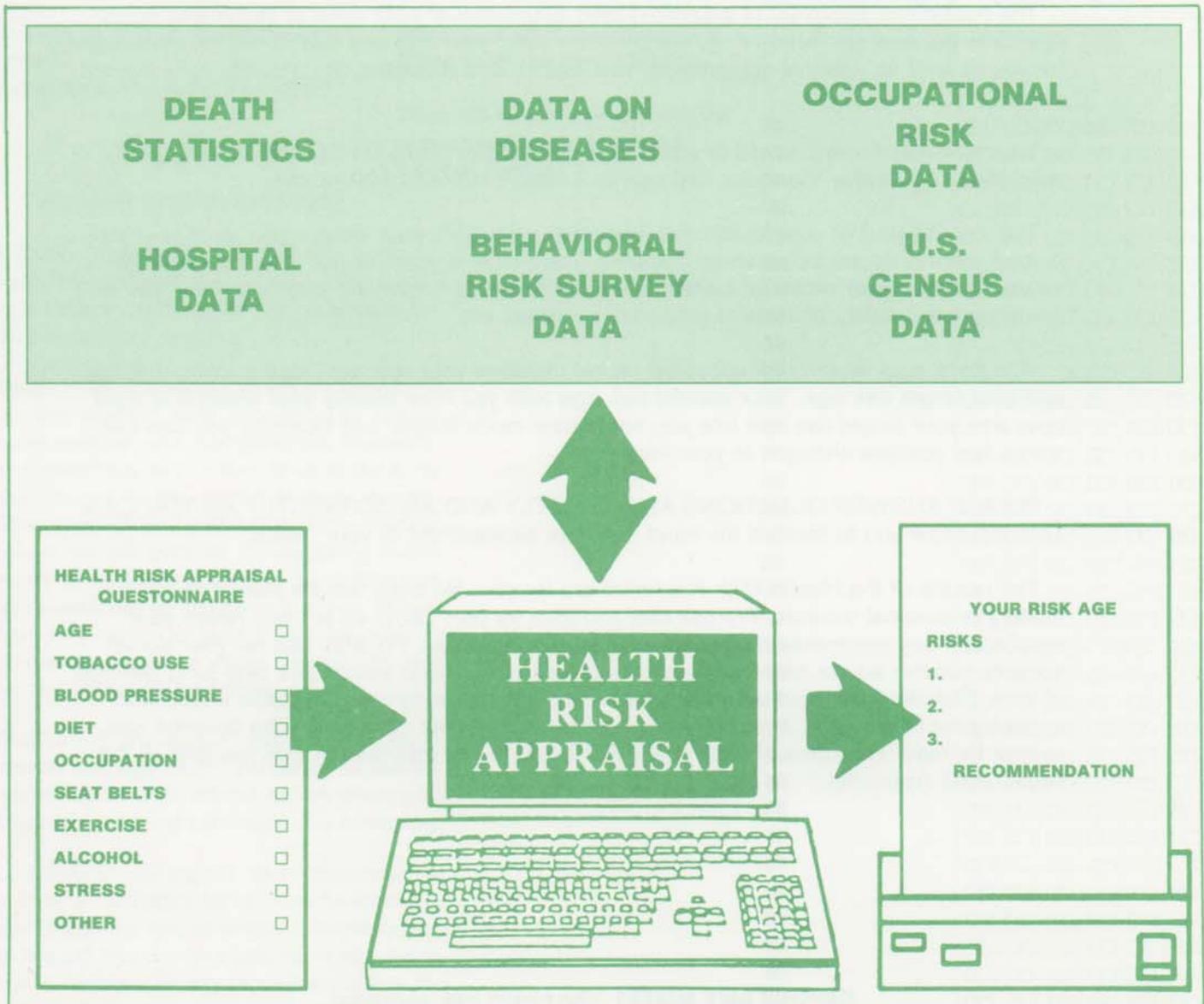
APPENDIX A: THE ARMY'S HEALTH RISK APPRAISAL (HRA) QUESTIONNAIRE

THE ARMY HEALTH PROMOTION PROGRAM

Fit to Win



HEALTH RISK APPRAISAL



For use of this form, see AR40-501 and AR600-63; the proponent agency is TSG

UNITED STATES ARMY

FIT TO WIN



The **HEALTH RISK APPRAISAL** is an activity of
THE ARMY HEALTH PROMOTION PROGRAM

How does the Health Risk Appraisal work?

The health risk appraisal is a personalized estimation of your risks of death and major illness in the next ten years. First, the program uses your age and health-related personal habits, as well as national statistics on risk factors and diseases, to calculate your current risks.

Your risk may be expressed in terms of **RISK AGE** or **HEALTH SCORE**. Ideally, you want a risk age lower than your real age or a health score of 100 points.

The second part of your health risk appraisal calculates your risks again, as if your risk factors were reduced as much as possible. The result is your "target" risk age or health score. It shows your potential benefit, in health terms, of improving your lifestyle-if you quit smoking, wear safety belts, take moderate exercise, etc.

Therefore, your health risk appraisal report includes your real age, your current risk age and your target risk age. Your current risk age tells you how healthy your lifestyle is right now, and your target risk age lets you know how much longer and healthier you can live with a few positive changes in your lifestyle.

PLEASE ANSWER QUESTIONS AS HONESTLY AND AS CORRECTLY AS YOU CAN. This will allow you to receive the most accurate assessment of your health.

The results of the Health Risk Appraisal are for you. No copy will be placed in your military or medical records. We ask that you give us your name so we can return your results and any recommendations for follow-up care to you. We also ask for your social security number so we can statistically track trends in health awareness over long periods of time. Statistical information may be collected from an armywide database which will contain your information, but your name and social security number will be covered and cannot be read. The rules of the Privacy Act apply to any information that you give in the Health Risk Appraisal.

IMPORTANT NOTE! The health risk appraisal is no substitute for a physical examination or check-up. It will not give you a diagnosis nor will it tell you how long you will actually live. However, the health risk appraisal will help you understand and recognize your risk factors.

INSTRUCTIONS

Please use a No. 2 Pencil only to complete this survey. Make dark, black marks that fill the response boxes completely.

EXAMPLE: Correct Incorrect

Health Risk Appraisal (HRA)
for use of this form, see
AR40-501 and AR600-63;
the proponent is TSG

For MILITARY ONLY: Complete Questions 1-4.

1. What is your branch of service?

1. U.S. Army U.S. Marines
 U.S. Navy U.S. Coast Guard
 U.S. Air Force Other

2. What is your military status?

2. Regular Army USAR
 USAR/AGR ARNG
 ARNG/AGR Other

3. What is your current rank?

- 3.
- | ENLISTED | | OFFICER | | WARR. OFFIC. |
|------------------------------|------------------------------|------------------------------|-------------------------------|-------------------------------|
| <input type="checkbox"/> E-1 | <input type="checkbox"/> E-6 | <input type="checkbox"/> O-1 | <input type="checkbox"/> O-6 | <input type="checkbox"/> WO-1 |
| <input type="checkbox"/> E-2 | <input type="checkbox"/> E-7 | <input type="checkbox"/> O-2 | <input type="checkbox"/> O-7 | <input type="checkbox"/> WO-2 |
| <input type="checkbox"/> E-3 | <input type="checkbox"/> E-8 | <input type="checkbox"/> O-3 | <input type="checkbox"/> O-8 | <input type="checkbox"/> WO-3 |
| <input type="checkbox"/> E-4 | <input type="checkbox"/> E-9 | <input type="checkbox"/> O-4 | <input type="checkbox"/> O-9 | <input type="checkbox"/> WO-4 |
| <input type="checkbox"/> E-5 | | <input type="checkbox"/> O-5 | <input type="checkbox"/> O-10 | |

4. What is your Unit Identification Code? (Enter Specific Unit Identifier)

Print your Unit Identification Code in these blank boxes.

Then fill in the corresponding response box below each number/letter.

4.

UNIT CODE					
A	A	A	A	A	A
B	B	B	B	B	B
C	C	C	C	C	C
D	D	D	D	D	D
E	E	E	E	E	E
F	F	F	F	F	F
G	G	G	G	G	G
H	H	H	H	H	H
I	I	I	I	I	I
J	J	J	J	J	J
K	K	K	K	K	K
L	L	L	L	L	L
M	M	M	M	M	M
N	N	N	N	N	N
O	O	O	O	O	O
P	P	P	P	P	P
Q	Q	Q	Q	Q	Q
R	R	R	R	R	R
S	S	S	S	S	S
T	T	T	T	T	T
U	U	U	U	U	U
V	V	V	V	V	V
W	W	W	W	W	W
X	X	X	X	X	X
Y	Y	Y	Y	Y	Y
Z	Z	Z	Z	Z	Z
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

PRIVACY ACT STATEMENT

AUTHORITY: 29 CFR Chapter XVII, Occupational Safety and Health Standards; 5 U.S.C., section 150; Executive Orders 11612 and 11807 authorize the collection of this information.

PURPOSE: The primary use of this information is by the unit medical care providers to assure competent medical care. Additional disclosures of this information may be: To the Office of the Army Surgeon General in aggregated form to develop Army/Command fitness profiles; to Army medical researchers for the purpose of correlating health precursors to health problems or to commercial medical researchers for the same purpose. Where data from this system of records are provided to agencies external to the Army, Social Security Number and Name will be deleted.

ROUTINE USES: Information may be disclosed to departments and agencies of the Executive Branch in performance of their official duties relating to health risk appraisal and cardiovascular screening.

DISCLOSURE: Furnishing the information required on this form is mandatory for all Department of the Army active duty and reserve component military personnel. We ask that you give your name so we can return your results and any recommendations for follow-up care to you. We also ask for your social security number so we can statistically track trends in health awareness over long periods of time.

5. Spouse (husband or wife of active duty or Military Retiree)
 Retiree
 Son or daughter of Active Duty or Military Retiree
 DOD Employee
 Non-DOD Employee
 Other

5. For CIVILIANS ONLY: Complete Questions 5-6.
 Mark ALL categories applicable to you.

6. WG GS SES GM
 1 6 11 16
 2 7 12 17
 3 8 13 18
 4 9 14
 5 10 15

6. If you are a Civilian Government Employee, enter your category and current pay grade.

7. LAST NAME

FI

A	A	A	A	A	A	A	A	A	A	A	A
B	B	B	B	B	B	B	B	B	B	B	B
C	C	C	C	C	C	C	C	C	C	C	C
D	D	D	D	D	D	D	D	D	D	D	D
E	E	E	E	E	E	E	E	E	E	E	E
F	F	F	F	F	F	F	F	F	F	F	F
G	G	G	G	G	G	G	G	G	G	G	G
H	H	H	H	H	H	H	H	H	H	H	H
I	I	I	I	I	I	I	I	I	I	I	I
J	J	J	J	J	J	J	J	J	J	J	J
K	K	K	K	K	K	K	K	K	K	K	K
L	L	L	L	L	L	L	L	L	L	L	L
M	M	M	M	M	M	M	M	M	M	M	M
N	N	N	N	N	N	N	N	N	N	N	N
O	O	O	O	O	O	O	O	O	O	O	O
P	P	P	P	P	P	P	P	P	P	P	P
Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
R	R	R	R	R	R	R	R	R	R	R	R
S	S	S	S	S	S	S	S	S	S	S	S
T	T	T	T	T	T	T	T	T	T	T	T
U	U	U	U	U	U	U	U	U	U	U	U
V	V	V	V	V	V	V	V	V	V	V	V
W	W	W	W	W	W	W	W	W	W	W	W
X	X	X	X	X	X	X	X	X	X	X	X
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z

FOR ALL INDIVIDUALS

7. Your Name.

Print the first ten letters of your last name and your first initial in these blank boxes.

Then fill in the corresponding response box below each letter.

8. AD or RM
 Spouse of AD or RM
 1st 2nd 3rd 4th 5th Child
 Not Applicable

8. ARE YOU: (Mark ALL applicable categories)

- Active Duty or Retired Military
 Spouse of Active Duty or Retired Military
 1st, 2nd, 3rd, 4th, or 5th child of Active Duty or Retired Military
 Not Applicable

9. YOUR SPONSOR'S SOCIAL SECURITY NUMBER OR YOUR SOCIAL SECURITY NUMBER

9. Print your SSN in the blank boxes. Then fill in the corresponding response box below each number.

- * If ACTIVE DUTY or RETIRED military, enter your SSN
- * If a FAMILY MEMBER OF active duty or retired, enter sponsors SSN
- * For ALL OTHERS, enter your SSN

0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9

10. This Health Risk Appraisal is being administered in the following situation:

- In-Processing
- Periodic Physical Examination
- Pre-Physical Fitness Test
- Occupational Health Program
- Walk-In
- Other

11. Racial/Ethnic Background
Mark the most appropriate category.

- American Indian or Alaska Native
- Asian/Oriental
- Black, Hispanic
- Black Non-Hispanic
- Pacific Islander
- White, Hispanic
- White, Non-Hispanic
- Other

12. Marital Status.
Mark the most appropriate category.

- Married
- Never Married
- Divorced
- Separated
- Widowed
- Other

13. Are you MALE or FEMALE?

- Male
- Female

14. Your Age

15. Your Height

16. Your Weight

BEFORE you fill in the response boxes
write age, height, and weight at the
top of the columns.

EXAMPLE:
HEIGHT = 6 feet-0 inches
(Must enter if 0 inches)

HEIGHT	
FEET	INCHES
6	0
4	<input type="checkbox"/>
5	1
<input type="checkbox"/>	2
7	3

14. AGE
YEARS

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
<input type="checkbox"/>	8
<input type="checkbox"/>	9

15. HEIGHT
FEET INCHES

4	0
5	1
6	2
7	3
<input type="checkbox"/>	4
<input type="checkbox"/>	5
<input type="checkbox"/>	6
<input type="checkbox"/>	7
<input type="checkbox"/>	8
<input type="checkbox"/>	9
<input type="checkbox"/>	10
<input type="checkbox"/>	11

16. WEIGHT
POUNDS

0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
<input type="checkbox"/>	5	5
<input type="checkbox"/>	6	6
<input type="checkbox"/>	7	7
<input type="checkbox"/>	8	8
<input type="checkbox"/>	9	9

17. What is your Body Frame Size?

- Small
- Medium
- Large

18. How often do you do exercises that improve muscle strength, such as pushups, situps, weight lifting, a Nautilus/Universal workout, resistance training, etc...?

- 3 or more times a week
- 1 or 2 times a week
- Rarely or never

19. How often do you do at least 20 minutes of non-stop aerobic activity (vigorous exercise that greatly increases your breathing and heart rate such as running, fast walking, biking, swimming, rowing, etc...)?

- 3 or more times a week
- 1 or 2 times a week
- Rarely or never

20. How often do you eat high fiber foods such as whole grain breads, cereals, bran, raw fruit, or raw vegetables?

- At every meal
- Daily
- 3-5 days a week
- Less than 3 days a week
- Rarely or never

21. How often do you eat foods high in saturated fats such as beef, hamburger, pork, sausage, butter, whole milk, cheese, etc...?

- At every meal
- Daily
- 3-5 days a week
- Less than 3 days a week
- Rarely or never

22. Do you usually salt your food before tasting?

- Yes
- No

23 a.	CAR/TRK/VAN		23 b.	MOTORCYCLE	
		,000			,000
	0	0		0	0
	1	1		1	1
	2	2		2	2
	3	3		3	3
	4	4		4	4
	5	5		5	5
	6	6		6	6
	7	7		7	7
8	8	8	8		
9	9	9	9		

23.a. In the next 12 months how many thousands of miles will you travel by car, truck or van?

23.b. In the next 12 months how many thousands of miles will you travel by motorcycle?

NOTE: U.S. average for cars is 10,000 miles

24. Walk Sub/Compact Car Truck/Van
 Bike Mid or Full Car Stay at Home
 Motorcycle Bus/Subway/Train

24. On a typical day how do you usually travel? (Mark only one)

25. 0 1
 0 1 2 3 4 5 6 7 8 9
 0 1 2 3 4 5 6 7 8 9

25. What percent of the time do you usually buckle your safety belt when driving or riding?

EXAMPLE: 50%

0 1
 5 0 1 2 3 4 5 6 7 8 9
 0 1 2 3 4 5 6 7 8 9

26. Within 5 MPH of limit 11-15 MPH Over
 6-10 MPH Over More than 15 MPH Over
 Don't Drive

26. On the average, how close to the speed limit do you usually drive?

27. NO. OF TIMES **28. NO. OF DRINKS**

0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

27. How many times in the last month did you drive or ride when the driver had perhaps too much alcohol to drink?

28. How many drinks of alcoholic beverages do you have in a typical week?

NOTE:

1 Drink = 1 glass of wine = 1 can of beer = 1 shot of liquor

EXAMPLE: 2 DRINKS

0 2
 2 0
 1 1
 2 2

IF YOU DON'T DRINK SKIP TO QUESTION 35

29. Yes No

29. Have you ever felt you should cut down on your drinking?

30. Yes No

30. Have people ever annoyed you by criticizing your drinking?

31. Yes No

31. Have you ever felt bad or guilty about your drinking?

32. Yes No

32. Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover (eye opener)?

33. Yes No

33. Do your friends ever worry about your drinking?

34. Yes No

34. Have you ever had a drinking problem?

35. Yes No

35. Have you ever been told that you have diabetes (or sugar diabetes)?

36. Yes No

36. Are you now taking medicine for high blood pressure?

37. Daily or almost daily
 3 to 5 days a week
 Less than 3 days a week
 Rarely or never

37. How often do you eat two well-balanced meals per day?

38. Daily or almost daily
 3 to 5 days a week
 Less than 3 days a week
 Rarely or never

38. How often do you eat foods high in salt or sodium such as cold cuts, bacon, canned soups, potato chips, etc...?

39. Not Satisfied Somewhat Satisfied Mostly Satisfied Totally Satisfied Not Applicable

39. I am satisfied with my present job assignment and unit.

40. Money Supervisor No Problem
 Social Life Job
 Family Health

40. What causes the biggest problem in your life?

41. In the last year, how many serious personal losses or difficult problems have you had to handle (example, promotion passover, divorce/separation, legal or disciplinary action, bankruptcy, death of someone close, serious illness/injury of a loved one, etc.)?

42. In general, how satisfied are you with your life (e.g., work situation, social activity, accomplishing what you set out to do)?

43. How often are there people available that you can turn to for support in bad moments or illness?

44. How many hours of sleep do you usually get at night?

45. Have you seriously considered suicide within the last two years?

46. How often do you have any serious problems dealing with your husband or wife, parents, friends or with your children?

47. How often did you experience a major pleasant change in the past year? (for example, promotion, marriage, birth, award, etc.)?

48. How often has life been so overwhelming in the last year that you seriously considered hurting yourself?

49. In the past year, how often have you experienced repeated or long periods of depression?

50. In the past year, how often have your worries interfered with your daily life?

51. How often are you able to find times to relax?

52. How often do you feel that your present work situation is putting you under too much stress?

53. How many cigars do you usually smoke per day?

54. How many pipes of tobacco do you usually smoke per day?

55. How many times per day do you usually use smokeless tobacco? (Chewing tobacco, snuff, pouches, etc.)

EXAMPLE: 20 times

56. CIGARETTE SMOKING
How would you describe your cigarette smoking habits?

57. STILL SMOKE
a. How many cigarettes a day do you smoke?
b. How many years has it been since you smoked cigarettes fairly regularly?
c. What was the average number of cigarettes you smoked per day during the two years before you quit?

58. About how long has it been since you had a rectal exam?

59. When was the last time you visited the dental clinic for a check-up?

41. Several Few
 Some None

42. Not Satisfied Somewhat Satisfied Mostly Satisfied Totally Satisfied

43. Never Hardly Ever Sometimes Always

44. 5 Hours or less
 6-8 Hours
 9 Hours or more

45. Yes
 Yes, within the last year
 Yes, within the last 2 months
 No

46. Often Sometimes Seldom Never

47. Often Sometimes Seldom Never

48. Often Sometimes Seldom Never

49. Often Sometimes Seldom Never

50. Often Sometimes Seldom Never

51. Often Sometimes Seldom Never

52. Often Sometimes Seldom Never

53. TOBACCO USE HISTORY
 0 1 2 3 4 5 6 7 8 9 10

54. TOBACCO USE HISTORY
 0 1 2 3 4 5 6 7 8 9 10

55. TOBACCO USE HISTORY
 0 1 2 3 4 5
 6 7 8 9

56. Never Smoked (SKIP TO QUESTION 58)
 Current Smoker Ex-Smoker

57. a. NUMBER b. YEARS c. AVERAGE

0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

58. Less than 1 year
 1 year 3 or more years
 2 years Never

59. Within the last year
 Between one and two years ago
 Over two years ago

WOMEN ONLY

WOMEN ONLY

60. 5 6 7 8 9 10

60. At what age did you have your first menstrual period?

11 12 13 14 15 16 17 18 19 20

No Children 10

61. How old were you when your first child was born?

11 12 13 14 15 16 17 18 19 20

21 22 23 24 25 26 27 28 29 30

31 32 33 34 35 36 37 38 39 40

41 42 43 44 45 46 47 48 49 50

62. Less than 1 year

62. How long has it been since your last breast X-ray (Mammogram)?

1 year 3 or more years

2 years Never

63. 0 1 2 3 4 5 6 7 8 9 10

63. How many women in your natural family (mother and sisters only) have had breast cancer?

64. Yes No Don't know

64. Have you had a hysterectomy operation? (removal of the uterus)

65. Less than 1 year 2 years Never

65. How long has it been since you had a pap smear for cancer?

1 year 3 or more years

66. Monthly Rarely/Never Every few months

66. How often do you examine your breasts for lumps?

67. Less than 1 year 2 years Never

67. About how long has it been since you had your breasts examined by a physician or nurse?

1 year 3 or more years

MEN ONLY

MEN ONLY

68. Less than 1 year 2 years Never

68. About how long has it been since you had a prostate (rectal) exam?

1 year 3 or more years

69. Monthly Rarely/Never Every few months

69. How often do you do a testicular (sex organs) self exam?

Questions 70 - 75 should be completed by MEDICAL PERSONNEL ONLY.

70. TOTAL CHOL 0 1 2 3 4 5 6 7 8 9

70. Blood Lipids
Total Cholesterol
(mg/dl)

0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

71. HDL CHOL 0 1 2 3 4 5 6 7 8 9

71. Blood Lipids
HDL Cholesterol
(mg/dl)

0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

72. 12 HR. FAST 0 1 2 3 4 5 6 7 8 9

72. Blood Glucose
12 Hr. Fasting
(mg %)

0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

73. B.P.-SYSTOLIC 0 1 2 3 4 5 6 7 8 9

73. Blood Pressure
(Systolic)

74. B.P.-DIASTOLIC 0 1 2 3 4 5 6 7 8 9

74. Blood Pressure
(Diastolic)

0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

75. NL ABN w/o LVH

75. Most recent electrocardiogram results.

ABN w/LVH UNKNOWN

X1. 0 1 2 3 4 5 6 7 8 9 10

X2. 0 1 2 3 4 5 6 7 8 9 10

X3. 0 1 2 3 4 5 6 7 8 9 10

X4. 0 1 2 3 4 5 6 7 8 9 10

X5. 0 1 2 3 4 5 6 7 8 9 10

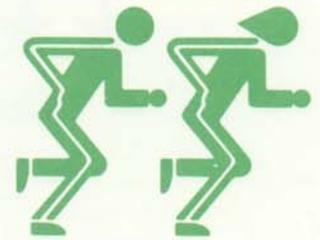
X6. 0 1 2 3 4 5 6 7 8 9 10

X7. 0 1 2 3 4 5 6 7 8 9 10

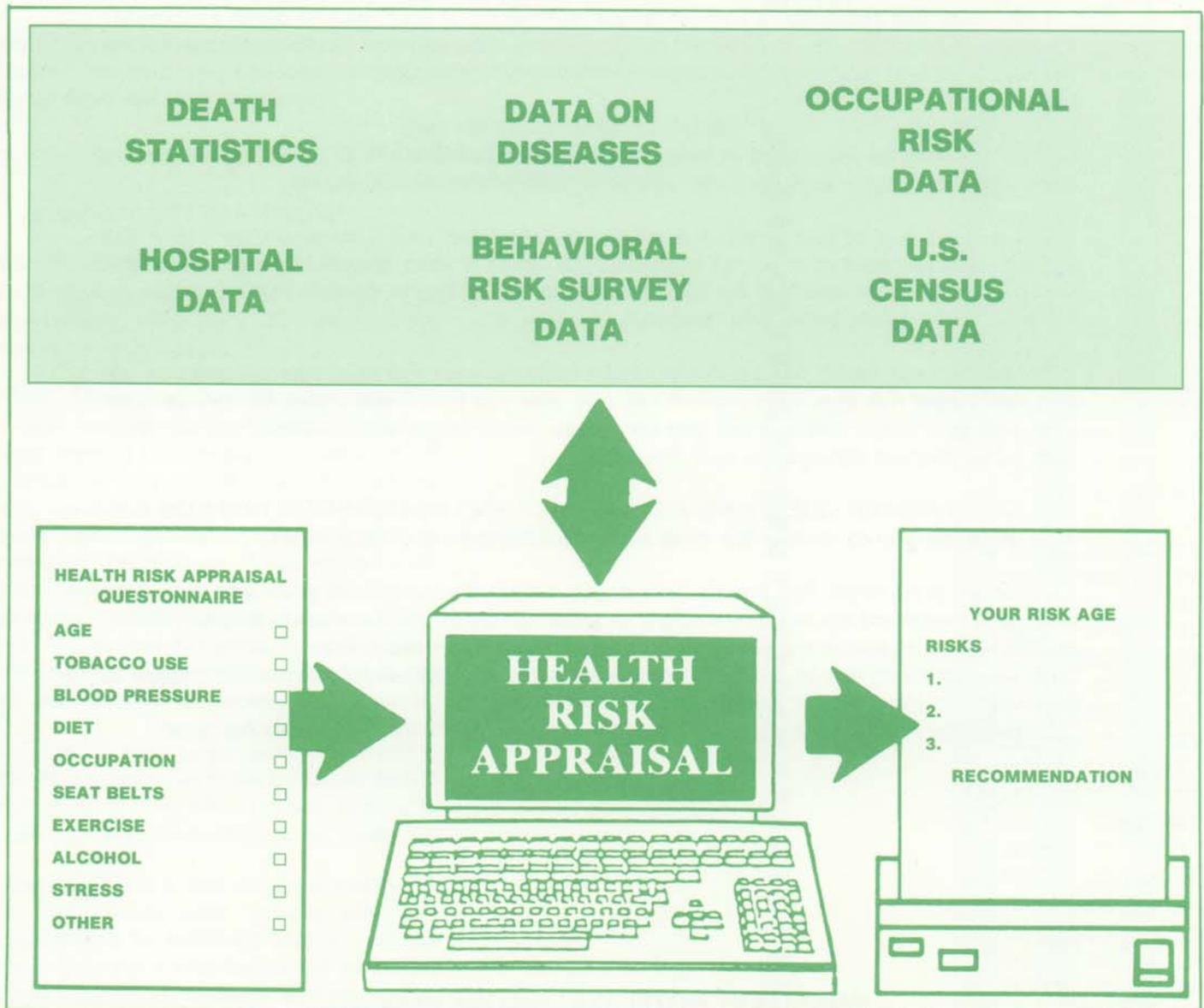
X8. 0 1 2 3 4 5 6 7 8 9 10

THE HEALTH PROMOTION PROGRAM

Fit to Win



HEALTH RISK APPRAISAL



For use of this form, see AR40-501 and AR600-63; the proponent agency is TSG

FIT TO WIN



TM

The **HEALTH RISK APPRAISAL** is an activity of
THE HEALTH PROMOTION PROGRAM

How does the Health Risk Appraisal work?

The health risk appraisal is a personalized estimation of your risks of death and major illness in the next ten years. First, the program uses your age and health-related personal habits, as well as national statistics on risk factors and diseases, to calculate your current risks.

Your risk may be expressed in terms of RISK AGE or HEALTH SCORE. Ideally, you want a risk age lower than your real age or a health score of 100 points.

The second part of your health risk appraisal calculates your risks again, as if your risk factors were reduced as much as possible. The result is your "target" risk age or health score. It shows your potential benefit, in health terms, of improving your lifestyle-if you quit smoking, wear safety belts, take moderate exercise, etc.

Therefore, your health risk appraisal report includes your real age, your current risk age and your target risk age. Your current risk age tells you how healthy your lifestyle is right now, and your target risk age lets you know how much longer and healthier you can live with a few positive changes in your lifestyle.

PLEASE ANSWER QUESTIONS AS HONESTLY AND AS CORRECTLY AS YOU CAN.
This will allow you to receive the most accurate assessment of your health.

The results of the Health Risk Appraisal are for you. We ask that you give us your name so we can return your results and any recommendations for follow-up care to you. We also ask for your social security number so we can statistically track trends in health awareness over long periods of time. Statistical information may be collected from an wide database which will contain your information, but your name and social security number will be covered and cannot be read. The rules of the Privacy Act apply to any information that you give in the Health Risk Appraisal.

IMPORTANT NOTE! The health risk appraisal is no substitute for a physical examination or check-up. It will not give you a diagnosis nor will it tell you how long you will actually live. However, the health risk appraisal will help you understand and recognize your risk factors.

INSTRUCTIONS

Please use a No. 2 Pencil only to complete this survey. Make dark, black marks that fill the response boxes completely.

EXAMPLE: Correct Incorrect

Health Risk Appraisal (HRA)
for use of this form, see
AR40-501 and AR600-63;
the proponent is TSG

For MILITARY SERVICE MEMBERS ONLY: Complete Questions 1-4. (All others go to Question 5.)

1. What is your branch of service?

1. U.S. Army U.S. Marines
 U.S. Navy U.S. Coast Guard
 U.S. Air Force Other

2. What is your military status?

2. Active Reserve
 Active Reserve Guard
 Active Guard Other

3. What is your current rank?

- 3.
- | ENLISTED | | OFFICER | | WARR. OFFIC. |
|------------------------------|------------------------------|------------------------------|-------------------------------|-------------------------------|
| <input type="checkbox"/> E-1 | <input type="checkbox"/> E-6 | <input type="checkbox"/> O-1 | <input type="checkbox"/> O-6 | <input type="checkbox"/> WO-1 |
| <input type="checkbox"/> E-2 | <input type="checkbox"/> E-7 | <input type="checkbox"/> O-2 | <input type="checkbox"/> O-7 | <input type="checkbox"/> WO-2 |
| <input type="checkbox"/> E-3 | <input type="checkbox"/> E-8 | <input type="checkbox"/> O-3 | <input type="checkbox"/> O-8 | <input type="checkbox"/> WO-3 |
| <input type="checkbox"/> E-4 | <input type="checkbox"/> E-9 | <input type="checkbox"/> O-4 | <input type="checkbox"/> O-9 | <input type="checkbox"/> WO-4 |
| <input type="checkbox"/> E-5 | | <input type="checkbox"/> O-5 | <input type="checkbox"/> O-10 | |

4. What is your Unit Identification Code? (Enter Specific Unit Identifier)

Print your Unit Identification Code in these blank boxes.

Then fill in the corresponding response box below each number/letter.

4.

UNIT CODE					
A	A	A	A	A	A
B	B	B	B	B	B
C	C	C	C	C	C
D	D	D	D	D	D
E	E	E	E	E	E
F	F	F	F	F	F
G	G	G	G	G	G
H	H	H	H	H	H
I	I	I	I	I	I
J	J	J	J	J	J
K	K	K	K	K	K
L	L	L	L	L	L
M	M	M	M	M	M
N	N	N	N	N	N
O	O	O	O	O	O
P	P	P	P	P	P
Q	Q	Q	Q	Q	Q
R	R	R	R	R	R
S	S	S	S	S	S
T	T	T	T	T	T
U	U	U	U	U	U
V	V	V	V	V	V
W	W	W	W	W	W
X	X	X	X	X	X
Y	Y	Y	Y	Y	Y
Z	Z	Z	Z	Z	Z
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

PRIVACY ACT STATEMENT

AUTHORITY: 29 CFR Chapter XVII, Occupational Safety and Health Standards; 5 U.S.C., section 150; Executive Orders 11612 and 11807 authorize the collection of this information.

PURPOSE: The primary use of this information is by the unit medical care providers to assure competent medical care. Additional disclosures of this information may be: To the Office of the Surgeons General in aggregated form to develop Command fitness profiles; to military medical researchers for the purpose of correlating health precursors to health problems or to commercial medical researchers for the same purpose. Where data from this system of records are provided to agencies external to the military, Social Security Number and Name will be deleted.

ROUTINE USES: Information may be disclosed to departments and agencies of the Executive Branch in performance of their official duties relating to health risk appraisal and cardiovascular screening.

DISCLOSURE: We ask that you give your name so we can return your results and any recommendations for follow-up care to you. We also ask for your social security number so we can statistically track trends in health awareness over long periods of time.

5. Spouse (husband or wife of active duty or Military Retiree)
 Retiree
 Son or daughter of Active Duty or Military Retiree
 DOD Employee
 Non-DOD Employee
 Other

5. For CIVILIANS, MILITARY RETIREES, AND FAMILY MEMBERS ONLY: Complete questions 5-6
Mark ALL categories applicable to you.

6. WG GS SES GM
 1 6 11 16
 2 7 12 17
 3 8 13 18
 4 9 14
 5 10 15

6. If you are a Civilian Government Employee, enter your category and current pay grade.

7. LAST NAME										FI
A	A	A	A	A	A	A	A	A	A	A
B	B	B	B	B	B	B	B	B	B	B
C	C	C	C	C	C	C	C	C	C	C
D	D	D	D	D	D	D	D	D	D	D
E	E	E	E	E	E	E	E	E	E	E
F	F	F	F	F	F	F	F	F	F	F
G	G	G	G	G	G	G	G	G	G	G
H	H	H	H	H	H	H	H	H	H	H
I	I	I	I	I	I	I	I	I	I	I
J	J	J	J	J	J	J	J	J	J	J
K	K	K	K	K	K	K	K	K	K	K
L	L	L	L	L	L	L	L	L	L	L
M	M	M	M	M	M	M	M	M	M	M
N	N	N	N	N	N	N	N	N	N	N
O	O	O	O	O	O	O	O	O	O	O
P	P	P	P	P	P	P	P	P	P	P
Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
R	R	R	R	R	R	R	R	R	R	R
S	S	S	S	S	S	S	S	S	S	S
T	T	T	T	T	T	T	T	T	T	T
U	U	U	U	U	U	U	U	U	U	U
V	V	V	V	V	V	V	V	V	V	V
W	W	W	W	W	W	W	W	W	W	W
X	X	X	X	X	X	X	X	X	X	X
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z

FOR ALL INDIVIDUALS

7. Your Name.

Print the first ten letters of your last name and your first initial in these blank boxes.

Then fill in the corresponding response box below each letter.

8. AD or RM
 Spouse of AD or RM
 1st 2nd 3rd 4th 5th Child
 Not Applicable

8. ARE YOU: (Mark ALL applicable categories)

- Active Duty or Retired Military
- Spouse of Active Duty or Retired Military
- 1st, 2nd, 3rd, 4th, or 5th child of Active Duty or Retired Military
- Not Applicable

9. YOUR SPONSOR'S SOCIAL SECURITY NUMBER OR YOUR SOCIAL SECURITY NUMBER									
			-						
0	0	0		0	0		0	0	0
1	1	1		1	1		1	1	1
2	2	2		2	2		2	2	2
3	3	3		3	3		3	3	3
4	4	4		4	4		4	4	4
5	5	5		5	5		5	5	5
6	6	6		6	6		6	6	6
7	7	7		7	7		7	7	7
8	8	8		8	8		8	8	8
9	9	9		9	9		9	9	9

9. Print your SSN in the blank boxes. Then fill in the corresponding response box below each number.

- * If ACTIVE DUTY or RETIRED military, enter your SSN
- * If a FAMILY MEMBER OF active duty or retired, enter sponsors SSN
- * For ALL OTHERS, enter your SSN

10. This Health Risk Appraisal is being administered in the following situation:

- In-Processing
- Periodic Physical Examination
- Pre-Physical Fitness Test
- Occupational Health Program
- Walk-In
- Other

11. Racial/Ethnic Background
Mark the most appropriate category.

- American Indian or Alaska Native
- Asian/Oriental White, Hispanic
- Black, Hispanic White, Non-Hispanic
- Black Non-Hispanic Other
- Pacific Islander

12. Marital Status.
Mark the most appropriate category.

- Married Separated
- Never Married Widowed
- Divorced Other

13. Are you MALE or FEMALE?

- MALE FEMALE

14. Your Age

15. Your Height

16. Your Weight

BEFORE you fill in the response boxes
write age, height, and weight at the
top of the columns.

EXAMPLE:

HEIGHT = 6 feet-0 inches
(Must enter if 0 inches)

HEIGHT	
FEET	INCHES
6	0
4	<input type="checkbox"/>
5	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>

14. AGE	15. HEIGHT	16. WEIGHT
YEARS	FEET INCHES	POUNDS
<input type="checkbox"/> 0 <input type="checkbox"/> 0	<input type="checkbox"/> 4 <input type="checkbox"/> 0	<input type="checkbox"/> 0 <input type="checkbox"/> 0 <input type="checkbox"/> 0
<input type="checkbox"/> 1 <input type="checkbox"/> 1	<input type="checkbox"/> 5 <input type="checkbox"/> 1	<input type="checkbox"/> 1 <input type="checkbox"/> 1 <input type="checkbox"/> 1
<input type="checkbox"/> 2 <input type="checkbox"/> 2	<input type="checkbox"/> 6 <input type="checkbox"/> 2	<input type="checkbox"/> 2 <input type="checkbox"/> 2 <input type="checkbox"/> 2
<input type="checkbox"/> 3 <input type="checkbox"/> 3	<input type="checkbox"/> 7 <input type="checkbox"/> 3	<input type="checkbox"/> 3 <input type="checkbox"/> 3 <input type="checkbox"/> 3
<input type="checkbox"/> 4 <input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4 <input type="checkbox"/> 4 <input type="checkbox"/> 4
<input type="checkbox"/> 5 <input type="checkbox"/> 5	<input type="checkbox"/> 5	<input type="checkbox"/> 5 <input type="checkbox"/> 5 <input type="checkbox"/> 5
<input type="checkbox"/> 6 <input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="checkbox"/> 6 <input type="checkbox"/> 6 <input type="checkbox"/> 6
<input type="checkbox"/> 7 <input type="checkbox"/> 7	<input type="checkbox"/> 7	<input type="checkbox"/> 7 <input type="checkbox"/> 7 <input type="checkbox"/> 7
<input type="checkbox"/> 8 <input type="checkbox"/> 8	<input type="checkbox"/> 8	<input type="checkbox"/> 8 <input type="checkbox"/> 8 <input type="checkbox"/> 8
<input type="checkbox"/> 9 <input type="checkbox"/> 9	<input type="checkbox"/> 9	<input type="checkbox"/> 9 <input type="checkbox"/> 9 <input type="checkbox"/> 9
	<input type="checkbox"/> 10	
	<input type="checkbox"/> 11	

17. What is your Body Frame Size?

- Small
- Medium
- Large

18. How often do you do exercises that improve muscle strength, such as pushups, situps, weight lifting, a Nautilus/Universal workout, resistance training, etc...?

- 3 or more times a week
- 1 or 2 times a week
- Rarely or never

19. How often do you do at least 20 minutes of non-stop aerobic activity (vigorous exercise that greatly increases your breathing and heart rate such as running, fast walking, biking, swimming, rowing, etc...)?

- 3 or more times a week
- 1 or 2 times a week
- Rarely or never

20. How often do you eat high fiber foods such as whole grain breads, cereals, bran, raw fruit, or raw vegetables?

- At every meal
- Daily
- 3-5 days a week
- Less than 3 days a week
- Rarely or never

21. How often do you eat foods high in saturated fats such as beef, hamburger, pork, sausage, butter, whole milk, cheese, etc...?

- At every meal
- Daily
- 3-5 days a week
- Less than 3 days a week
- Rarely or never

22. Do you usually salt your food before tasting?

- YES NO

23. **a.** CAR/TRK/VAN .000

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

b. MOTORCYCLE .000

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

23.a. In the next 12 months how many thousands of miles will you travel by car, truck or van?

23.b. In the next 12 months how many thousands of miles will you travel by motorcycle?

NOTE: U.S. average for cars is 10,000 miles

24.

Walk Sub/Compact Car Truck/Van
 Bike Mid or Full Car Stay at Home
 Motorcycle Bus/Subway/Train

24. On a typical day how do you usually travel? (Mark only one)

25.

0	1								
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9

25. What percent of the time do you usually buckle your safety belt when driving or riding?

EXAMPLE: 50%

0	1								
5	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9

26.

Within 5 MPH of limit 11-15 MPH Over
 6-10 MPH Over More than 15 MPH Over
 Don't Drive

26. On the average, how close to the speed limit do you usually drive?

27. NO. OF TIMES

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

28. NO. OF DRINKS

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

27. How many times in the last month did you drive or ride when the driver had perhaps too much alcohol to drink?

28. How many drinks of alcoholic beverages do you have in a typical week?

NOTE:

1 Drink = 1 glass of wine or wine cooler = 1 can of beer = 1 shot of liquor = 1 mixed drink.

EXAMPLE: 2 DRINKS

0	2
1	1
2	1

29. Yes No

30. Yes No

31. Yes No

32. Yes No

29. Have you ever felt you should cut down on your drinking?

30. Have people ever annoyed you by criticizing your drinking?

31. Have you ever felt bad or guilty about your drinking?

32. Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover (eye opener)?

33. Yes No

34. Yes No

35. Yes No

36. Yes No

33. Do your friends ever worry about your drinking?

34. Have you ever had a drinking problem?

35. Have you ever been told that you have diabetes (or sugar diabetes)?

36. Are you now taking medicine for high blood pressure?

37.

Daily or almost daily
 3 to 5 days a week
 Less than 3 days a week
 Rarely or never

37. How often do you eat two well-balanced meals per day?

38.

Daily or almost daily
 3 to 5 days a week
 Less than 3 days a week
 Rarely or never

38. How often do you eat foods high in salt or sodium such as cold cuts, bacon, canned soups, potato chips, etc...?

39.

Not Satisfied Somewhat Satisfied Mostly Satisfied Totally Satisfied Not Applicable

39. I am satisfied with my present job assignment and unit.

40.

Money Supervisor No Problem
 Social Life Job
 Family Health

40. What causes the biggest problem in your life?

41. In the last year, how many serious personal losses or difficult problems have you had to handle (example, promotion passover, divorce/separation, legal or disciplinary action, bankruptcy, death of someone close, serious illness/injury of a loved one, etc.)?

42. In general, how satisfied are you with your life (e.g., work situation, social activity, accomplishing what you set out to do)?

43. How often are there people available that you can turn to for support in bad moments or illness?

44. How many hours of sleep do you usually get at night?

45. Have you seriously considered suicide within the last two years?

46. How often do you have any serious problems dealing with your husband or wife, parents, friends or with your children?

47. How often did you experience a major pleasant change in the past year? (for example, promotion, marriage, birth, award, etc.)?

48. How often has life been so overwhelming in the last year that you seriously considered hurting yourself?

49. In the past year, how often have you experienced repeated or long periods of depression?

50. In the past year, how often have your worries interfered with your daily life?

51. How often are you able to find times to relax?

52. How often do you feel that your present work situation is putting you under too much stress?

TOBACCO USE HISTORY

53. How many cigars do you usually smoke per day?

54. How many pipes of tobacco do you usually smoke per day?

55. How many times per day do you usually use smokeless tobacco? (Chewing tobacco, snuff, pouches, etc.)

EXAMPLE: 20 times

56. **CIGARETTE SMOKING**
How would you describe your cigarette smoking habits?

57. **STILL SMOKE** **USED TO SMOKE**

a. How many cigarettes a day do you smoke? b. How many years has it been since you smoked cigarettes fairly regularly?

c. What was the average number of cigarettes you smoked per day during the two years before you quit?

58. About how long has it been since you had a rectal exam?

59. When was the last time you visited the dental clinic for a check-up?

41. Several Few
 Some None

42. Not Satisfied Somewhat Satisfied Mostly Satisfied Totally Satisfied

43. Never Hardly Ever Sometimes Always

44. 5 Hours or less
 6-8 Hours
 9 Hours or more

45. Yes
 Yes, within the last year
 Yes, within the last 2 months
 No

46. Often Sometimes Seldom Never

47. Often Sometimes Seldom Never

48. Often Sometimes Seldom Never

49. Often Sometimes Seldom Never

50. Often Sometimes Seldom Never

51. Often Sometimes Seldom Never

52. Often Sometimes Seldom Never

53. 0 1 2 3 4 5 6 7 8 9 10

54. 0 1 2 3 4 5 6 7 8 9 10

55. 0 1 2 3 4 5
 0 1 2 3 4 5 6 7 8 9

56. Never Smoked (SKIP TO QUESTION 58)
 Current Smoker Ex-Smoker

57. a. NUMBER b. YEARS c. AVERAGE

0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

58. Less than 1 year
 1 year 3 or more years
 2 years Never

59. Within the last year
 Between one and two years ago
 Over two years ago

WOMEN ONLY

WOMEN ONLY

60. 5 6 7 8 9 10
 11 12 13 14 15 16 17 18 19 20
 No Children 10

61. 11 12 13 14 15 16 17 18 19 20
 21 22 23 24 25 26 27 28 29 30
 31 32 33 34 35 36 37 38 39 40
 41 42 43 44 45 46 47 48 49 50

60. At what age did you have your first menstrual period?

61. How old were you when your first child was born?

62. Less than 1 year
 1 year 2 years 3 or more years Never

62. How long has it been since your last breast X-ray (Mammogram)?

63. 0 1 2 3 4 5 6 7 8 9 10

63. How many women in your natural family (mother and sisters only) have had breast cancer?

64. Yes No Don't know

64. Have you had a hysterectomy operation? (removal of the uterus)

65. Less than 1 year 1 year 2 years 3 or more years Never

65. How long has it been since you had a pap smear for cancer?

66. Monthly Rarely/Never Every few months

66. How often do you examine your breasts for lumps?

67. Less than 1 year 1 year 2 years 3 or more years Never

67. About how long has it been since you had your breasts examined by a physician or nurse?

MEN ONLY

MEN ONLY

68. Less than 1 year 1 year 2 years 3 or more years Never

68. About how long has it been since you had a prostate (rectal) exam?

69. Monthly Rarely/Never Every few months

69. How often do you do a testicular (sex organs) self exam?

Questions 70 - 75 should be completed by MEDICAL PERSONNEL ONLY.

70. TOTAL CHOL 0 1 2 3 4 5 6 7 8 9

71. HDL CHOL 0 1 2 3 4 5 6 7 8 9

72. 12 HR. FAST 0 1 2 3 4 5 6 7 8 9

70. Blood Lipids Total Cholesterol (mg/dl)

71. Blood Lipids HDL Cholesterol (mg/dl)

72. Blood Glucose 12 Hr. Fasting (mg %)

73. B.P.-SYSTOLIC 0 1 2 3 4 5 6 7 8 9

74. B.P.-DIASTOLIC 0 1 2 3 4 5 6 7 8 9

73. Blood Pressure (Systolic)

74. Blood Pressure (Diastolic)

75. NL ABN w/LVH ABN w/o LVH UNKNOWN

75. Most recent electrocardiogram results.

X1. 0 1 2 3 4 5 6 7 8 9 10

X2. 0 1 2 3 4 5 6 7 8 9 10

X3. 0 1 2 3 4 5 6 7 8 9 10

X4. 0 1 2 3 4 5 6 7 8 9 10

X5. 0 1 2 3 4 5 6 7 8 9 10

X6. 0 1 2 3 4 5 6 7 8 9 10

X7. 0 1 2 3 4 5 6 7 8 9 10

X8. 0 1 2 3 4 5 6 7 8 9 10